THE LANCET

A Journal of British and Foreign Medicine, Surgery, Obstetrics, Physiology, Chemistry, Pharmacology, Public Health, and News.

TELEGRAPHIC ADDRESS—LANCET, WESTRAND LONDON TELEPHONE NUMBER—GERRARD 5356

No. XIX. of Vol. I., 1918.
No. 4941. Vol. CXCIV. LONDON, SATURDAY, MAY 11, 1918. **Price 8d.**

MILITARY MEDICAL MANUALS

Under the General Editorship of

Sir ALFRED KEOGH, G.C.B., LL.D., M.D., F.R.C.P., Hon. F.R.C.S.,
Late Director-General, Army Medical Service;

and

Lieut.-Gen. T. H. J. C. GOODWIN, C.B., C.M.G., D.S.O.,
Director-General, Army Medical Service.

From THE BRITISH MEDICAL JOURNAL:—"The books are short and practical, and are founded upon the most recent clinical and laboratory experience."

From THE LANCET:—"The names of the editors are sufficient guarantee that the subject matter is treated with fairness and discrimination."

From THE TIMES:—"A series of really first-class manuals of Medicine and Surgery ..... the translations are admirably made."

Please write for detailed prospectus of 21 volumes now ready.

University of London Press Ltd.,
(P. Dept.), 18, Warwick-square, London, E.C. 4.

BY P. LOCKHART-MUMMERY, F.R.C.S.

DISEASES OF THE COLON AND THEIR SURGICAL TREATMENT.

Numerous Illustrations and Coloured Plates. 10s. net.

Baillière, Tindall & Cox, 8, Henrietta-street, Covent Garden.

By FREDERICK J. McCANN, M.D.Edin., F.R.C.S.Eng.,
Surgeon, Samaritan Free Hospital for Women, London, N.W.

CANCER OF THE WOMB: ITS SYMPTOMS, DIAGNOSIS, PROGNOSIS, AND TREATMENT.

Fully illustrated. 20s. net.

LIVERPOOL MEDICO-CHIRURGICAL JOURNAL.—"Cancer of the Womb, by F. J. McCann, is a book that can be recommended alike to the general practitioner and the specialist. Written in a fluent manner, it embodies the ripe experience of a renowned operator, trained observer, and patient investigator."

EDINBURGH MEDICAL JOURNAL.—"The book is one of very great merit; it will be read with interest both by the specialist and general practitioner as an authoritative exposition of the important subject with which it deals."

PRACTITIONER.—"Dr. McCann has produced a valuable work which deserves to be widely known."

ST. BARTHOLOMEW'S HOSPITAL JOURNAL.—"The plates are excellent. This is a book we can thoroughly recommend."

London: Henry Frowde and Hodder & Stoughton.

Now Ready. Second Edition. Revised. With 114 Figures, including 6 Plates. Price 6s. net.

CARREL & DEHELLY'S

INFECTED WOUNDS.

Translated by H. CHILD, Capt. R.A.M.C. (Ty.)
With Introduction by Sir ANTHONY BOWLBY, K.C.M.G.
Baillière, Tindall & Cox, 8, Henrietta-st., Covent Garden, London, W.C.2

NEW (2ND) EDITION.

FAUGHT'S BLOOD-PRESSURE

See Saunders' Advertisement on Page 5.

Fourth Edition. With 22 Illustrations. Price 4s. net.

BLOMFIELD'S ANÆSTHETICS.

"A truly excellent manual."—LANCET.
London: Baillière, Tindall & Cox, 8, Henrietta-st., Covent Garden, W.C.2.

8vo, 12s. 6d. net. Stereoscope, 2s. 6d. net.

RHINOLOGY: A TEXT-BOOK OF THE DISEASES OF THE NOSE AND ACCESSORY SINUSES.

47 Plates and 146 Illustrations.
By P. WATSON-WILLIAMS, M.D.Lond.,
Lecturer on Diseases of Ear, Nose, and Throat, University of Bristol, and in Charge of Ear, Nose, and Throat Department, Bristol Royal Infirmary.
Longmans, Green & Co., 39, Paternoster-row, London, E.C.

J. W. THOMSON WALKER, M.B., C.M.Edin., F.R.C.S.Eng.

SURGICAL DISEASES AND INJURIES OF THE GENITO-URINARY ORGANS.

880 pages, 24 Colour and 21 Black-and-White Plates and 279 Illustrations in the Text. Price 25s. net.

"Will hold its place for many years as the best English text-book on the subject."—BRITISH JOURNAL OF SURGERY.

Cassell & Co., La Belle Sauvage, London, E.C.

JUST PUBLISHED.

DISEASES OF THE HEART: Their Diagnosis, Prognosis, and Treatment by Modern Methods.

With a Chapter on the Electro-Cardiograph.
By FREDERICK W. PRICE, M.D., F.R.S. (Edin.), Physician to the Great Northern Central Hospital; Assistant Physician to the National Hospital for Diseases of the Heart, London. Late Lecturer on Polygraphic Methods at the Medical Graduates' College and Polyclinic.
Demy 8vo. Cloth. Very fully Illustrated. Price 21s. net.
Henry Frowde and Hodder & Stoughton, Oxford Press Warehouse, Falcon-square, London, E.C. 1.

H. K. LEWIS & CO. LTD., MEDICAL PUBLISHERS AND BOOKSELLERS.

Close to Euston Square Station (Metropolitan Railway), Warren Street Station for All Tube Railways.

Text-Books and Works in Medical, Surgical, and General Science of all Publishers.
Special Stock of Books in all branches of Military Medical Work.

. . . Orders by Post or Telephone promptly attended to. . . .

Special attention to packing and forwarding of Books to All Parts of the World.

MEDICAL AND SCIENTIFIC CIRCULATING LIBRARY.

Annual Subscription, Town or Country, from One Guinea.

See Advertisement Page 4.

136 GOWER STREET and 24 GOWER PLACE, LONDON, W.C. 1

Telegrams: "PUBLICAVIT, EUSROAD, LONDON." Telephone: MUSEUM 1072.

"COFECTANT" LOZENGES

These Lozenges are safe for all persons, including young Children, and they should be taken whenever there is a soreness or hoarseness in the throat.

The surfaces and membranes of the mouth and throat, moistened by saliva charged with "COFECTANT" will be sterilized and the air on its way to the lungs will be rendered aseptic.

1/3 per Box from all High-class Chemists.

EDWARD COOK & CO., Ltd., Bow, LONDON, E. 3.

LESLIES' ZŌPLA

(ZINC OXIDE PLASTER) **Formerly Zincoplast.**

THE PERFECTED SURGICAL PLASTER.

Instantly Self-adhesive. Will not slip wherever put. THE ONE REAL NON-IRRITATING PLASTER. Will keep without drying up.

Supplied on White and Flesh-colour Cloths, also on Holland on Spools ½" to 4" wide in 5 or 10 yard lengths, in rolls 7" and 12" wide. Also on moleskin, chamois leather, felt, and waterproof cloth. **SAMPLES ON REQUEST.**

ZŌPLA is made by the firm with the reputation for BROWN HOLLAND STRAPPING (Original make).

LESLIES, Ltd. (British firm throughout), **18, Eldon St., London, E.C. 2.**

PEARSON'S ANTISEPTICS

PACOLOL
(Lysol Preparation)
Pure Saponified Cresols.

HYCOL (Medical)
Carbolic Co-efficient on
B. TYPHOSUS, 38-40.

Bacterial Potency
for Staphylococcus Aureus
In peptone water 1'200000. In serum 1'1000.
Phagocytosis
is not inhibited in dilutions weaker than 1'500.

HYCOL (No. 1)
Co-efficient 18-20.
For General Use in Hospitals.
Used by the British Red Cross Hospitals.

HYCOL (No. 2)
Contains minimum amount of Cresols.
ORDINARY USE for the GENERAL PUBLIC.

MEDOL
Cresols and Iodine.
OXYGENATED HYDROCARBONS FOR SKIN TROUBLES. ANTIPARASITIC.

All Products are Perfectly Clear, Neutral, and Free of Tar.

PEARSON'S ANTISEPTIC CO. LTD.,

15, Elm Street, LONDON, W.C. 1. **Works: WILLIAM PEARSON LTD., HULL.**

THE LANCET.

No. 4941. LONDON, SATURDAY, MAY 11, 1918. Vol. CXCIV.

CONTENTS.

The whole of the literary matter in THE LANCET is copyright.

THE MILROY LECTURES
(Abstracts of) on the Teaching and Training in Hygiene: Some Criticisms and Suggestions. By H. R. KENWOOD, C.M.G., M.B.Ed., D.P.H., F.R.S.E., Chadwick Professor of Hygiene, University of London; M.O.H., Stoke Newington, &c.—Lecture I.... 663

ORIGINAL ARTICLES.
Tachycardia: Observations upon its Occurrence in the Enteric and other Fevers. By H. FAIRLEY MARRIS, M.R.C.P. Lond., Major, R.A.M.C.—*(Illustrated)*.. 667
Splints for Use in Arm, Ankle, and Leg Injuries, with some Observations on Treatment. By WILLIAM PEARSON, F.R.C.S.Irel., Major, R.A.M.C. (Temp.).—*(Illustrated)*..... 670
Liquid-Tight Closure and the Treatment of Wounds. By WALTER HERBERT TAYLOR, M.D., C.M.Tor., and NORMAN BURKE TAYLOR, M.B.Tor., M.R.C.S.Eng., F.R.C.S.Edin., Captains, Canadian Army Medical Corps.—*(Illustrated)*. 671
On Bladder Drainage and Irrigation. By JAMES MACMUNN, M.R.C.S., M.R.C.P.I.—*(Illustrated)*..... 672
Fistula in Ano. Why is Operative Interference so often Ineffectual? By F. SWINFORD EDWARDS, F.R.C.S., President of the Subsection of Pathology, Royal Society of Medicine, &c.—*(Illustrated)*... 673

MEDICAL SOCIETIES.
OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM: Annual Congress: Opening of Congress: Presidential Address.—Effects of Hypotony in Rabbits' Eyes.—Histology of the Trephined Disc in Glaucoma Operations.—The Use of the Visor for the Army.—The Dioptric Mean in the Myopic Soldier.—Suggested Clinical Tests of the Threshold of Light and Colour.—Plastic Operations of the Eyelids.—Conditions Affecting Standards of Vision in British Army.—Contagious Diseases of the Conjunctiva.. 675
JOURNALS:
The American Review of Tuberculosis..... 676
Veterinary Review. Edited by Professor O. Charnock Bradley..... 676

LEADING ARTICLES.
MEDICINE AND POOR-LAW RECONSTRUCTION..... 677
TACHYCARDIA IN THE ENTERIC GROUP OF INFECTIONS..... 678

ANNOTATIONS.
Purification of Contaminated Shell-fish..... 679
Liquid-Tight Closure of Wounds 679
The Causation of Myopia..... 679
South-Eastern Union of Scientific Societies..... 680
Purpura Annularis Teleangectodes..... 680
Exoneration of Surgeon-General MacNeece..... 680
Botulism (?) in the Metropolis..... 681

SPECIAL ARTICLES.
Canada: Canadian Medical Week in Hamilton, Ontario.—Combating Venereal Disease in Ontario.—The Blinded in the Halifax Disaster..... 681
Special Scales of Rations for Hospitals..... 682
A Council of Ophthalmologists 682
The Belgian Doctors' and Pharmacists' Relief Fund.—Subscriptions..... 682

CORRESPONDENCE.
Acute Œdema of the Lungs (Dr. F. de Havilland Hall).... 683
Lymphocytosis in Soldiers (Capt. James Miller, R.A.M.C. (T.)..... 683
The Etiology and Treatment of "Trench Foot" (Capt. James M. McQueen, R.A.M.C. (T.), Dr. R. A. Rowlands)..... 683
The Parliamentary Representation of the Combined Universities (Dr. E. Rowland Fothergill)..... 684
Erythrœdema (Dr. J. S. Doak). 684

OBITUARY.
Bernard Otto Kellner, M.D., C.M. Berlin..... 684
Oswald Meredith Jones, F.R.C.S.Eng..... 684
Surgeon-Major Edward Louis McSheehy..... 684
Thomas Parkyn Blades, L.R.C.P. & S. Edin..... 684
Munro Scott..... 684

THE WAR.
The Casualty List..... 685
Casualties among the Sons of Medical Men..... 685
Auxiliary Royal Army Medical Corps Funds..... 685
Hostels for Disabled Men..... 685
Red Cross Work in India..... 685

OBITUARY OF THE WAR:
Llewelyn Alfred Henry Bulkeley, M.B., B.S.Durh., Captain, Royal Army Medical Corps.—*(With Portrait)*..... 686
Samuel Edward McClatchey, M.B., Ch.B.Manch., Captain, Royal Army Medical Corps.—*(With Portrait)*..... 686
Sybil Lonie Lewis, L.R.C.P. & S. Edin., Order of St. Sava, Scottish Women's Hospitals.—*(With Portrait)*.. 686
Thomas Louis Enright, L., L.M., R.C.P. & S.I., Captain, Royal Army Medical Corps.—*(With Portrait)*..... 686

PARLIAMENTARY INTELLIGENCE.
Notes on Current Topics: Criminal Law Amendment and Sexual Offences Bill..... 688
House of Commons..... 688

THE SERVICES:
Royal Naval Medical Service. Army Medical Service.—Royal Army Medical Corps.... 690

URBAN VITAL STATISTICS:
English and Welsh Towns.... 691
Scotch Towns..... 691
Irish Towns..... 691

MEDICAL NEWS.
Royal School for Deaf and Dumb Children, Margate..... 686
Central Midwives Board for Scotland..... 686
Exeter Maternity Home..... 682
Royal Institution..... 682
Second Lieutenant S. Jackson. 686
Examining Board in England by the Royal Colleges of Physicians of London and Surgeons of England: Pass-list..... 687
Society of Apothecaries of London: Pass-list..... 687
London and Counties Medical Protection Society..... 687
Donations and Bequests..... 687
Ambulance Lectures and Demonstrations..... 687
R.A.M.C. Fund and R.A.M.C. Benevolent Society..... 687
Central Council for District Nursing in London..... 687
Military Medical Service..... 687
East Sussex Medico-Chirurgical Society..... 687

NOTES, SHORT COMMENTS, &c.
A Medical Library in War-time 693
Colonial Health Reports..... 693
Health and Food Notes..... 693
Gas Infection in Gunshot Wounds..... 693
The Cost of War Pensioners in Hospitals..... 693
Lectures for Intending Baby Week Speakers..... 693
Our Hospital Milk-Supply..... 694
The Decimal Association..... 694
Medical Sickness, Annuity and Life Assurance Friendly Society..... 694
Dental Clinics..... 694
Arabic Medical Tracts..... 694
Population of an Alpine Health Resort..... 694
Centenarians..... 694

Appointments..... 691
Vacancies..... 691
Births, Marriages, and Deaths.. 691
Editorial Notices..... 692
Acknowledgments of Communications received..... 692
Medical Diary..... 692
Meteorological Readings..... 694

THE LANCET

SUBSCRIPTION RATES

INLAND	One Year	£1 10 0
	Six Months	0 16 0
	Three Months	0 8 0
ABROAD	One Year	£1 12 6
	Six Months	0 17 6
	Three Months	0 8 9

Subscriptions may commence at any time and are payable in advance. Cheques and P.O.'s should be made payable to Mr. CHARLES GOOD, THE LANCET Offices, 423, Strand, London, W.C. 2.

ADVERTISEMENT RATES

Books and Publications ... ... } Four lines and
Official and General Announcements } under ... ... 4s. 0d.
Trade and Miscellaneous Advertisements ... ... }

Every additional line, 9d.

Quarter Page, £2. Half a Page, £4. Entire Page, £8.

Special Terms for Position Pages.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

FIELD SERVICE NOTES FOR R.A.M.C. New Edition. By Surgeon-General GOODWIN, A.M.S. 3s. 6d. net; postage 4d.

THE FUTURE OF THE DISABLED SOLDIER. By C. W. HUTT, M.A., M.D. Cantab., D.P.H. Oxford. Crown 8vo. 6s. net; postage 6d.

CLINICAL SURGICAL DIAGNOSIS FOR STUDENTS & PRACTITIONERS. By PROFESSOR F. DE QUERVAIN. Royal 8vo. 35s. net. Postage: inland 7d., abroad 2s.

JOHN BALE, SONS & DANIELSSON, Ltd., 83, 85, 87, 89, & 91, Gt. Titchfield St., Oxford St., London, W.1.

MACMILLAN & CO.'S NEW BOOKS.

Fibroids and Allied Tumours (Myoma and Adenomyoma):
Their Pathology, Clinical Features and Surgical Treatment. By CUTHBERT LOCKYER, M.D., B.S., F.R.C.P., F.R.C.S., Joint Editor of "The New System of Gynæcology." With an Introductory Notice by ALBAN DORAN, F.R.C.S., Consulting Surgeon to the Samaritan Free Hospital for Women. With 316 Illustrations, including 37 Coloured Plates. Super royal 8vo. 63s. net.

Diseases of the Arteries, including Angina Pectoris.
By Sir T. CLIFFORD ALLBUTT, K.C.B., M.D., F.R.S., &c. In Two Vols. 8vo. 30s. net.

ARCHIVES DES MALADIES DU CŒUR (Paris).—"Ce livre apprend à penser. Œuvre élaborée lentement dans l'esprit du maître de Cambridge, et qu'il appelle lui-même le 'fruit hivernal d'un arbre âgé,' elle représente la coordination de notions travaillées depuis près d'un demi-siècle. A Clifford Allbutt, aucune méthode nouvelle ne resta ignorée, quel que fut son pays d'origine; puis il les a mûries par un travail clinique énorme."

Hysterical Disorders of Warfare. By LEWIS R. YEALLAND, M.D., Resident Medical Officer, National Hospital for the Paralysed and Epileptic, Queen-square. With Preface by E. FARQUHAR BUZZARD, M.D., F.R.C.P., Lieut.-Colonel, R.A.M.C. 8vo. 7s. 6d. net.

An Enquiry into the Analytical Mechanism of the Internal EAR. By Sir THOMAS WRIGHTSON, Bart., Memb. Inst. C.E. With an Appendix on the Anatomy of the parts concerned by ARTHUR KEITH, M.D., F.R.S. Illustrated. 8vo. 12s. 6d. net.

A Handbook on Antiseptics. By HENRY D. DAKIN, D.Sc., F.I.C., F.R.S., and EDWARD K. DUNHAM, M.D. Pott 8vo. 7s. net.

MACMILLAN & CO., Ltd., London, W.C. 2.

JUST PUBLISHED. Demy 8vo. 8/- net. Fully Illustrated.

The Fitting-out and Administration of a
NAVAL HOSPITAL SHIP

By **EDWARD SUTTON,** Fleet Surgeon R.N., S.M.O. R.N. Hospital Ship "Plassy"; late S.M.O. R.N. Hospital Ship "Drina."

Records a description of the conversion of the S.S. "Drina," and also full details of the administration of a Hospital Ship, together with the organization or working of the ship.

BRISTOL: JOHN WRIGHT & SONS LTD. **LONDON: SIMPKIN, MARSHALL & CO. LTD.**

WORKS BY H. J. WARING,
M.S., M.B., B.Sc.Lond., F.R.C.S.,
Surgeon to, and Joint Lecturer in Surgery at, St. Bartholomew's Hospital; Consulting Surgeon to the Metropolitan Hospital; Member of Court of Examiners, Royal College of Surgeons; late Examiner in Surgery, University of London.

NEW EDITION SHORTLY.
8vo, extra cloth. Pp. xvi.-385, with 58 Engravings. Price 12/6 net.

SURGICAL DISEASES OF THE GALL-BLADDER, BILE DUCTS, AND LIVER.
THEIR PATHOLOGY, DIAGNOSIS, & TREATMENT.
(Including Jacksonian Prize Essay.)

MANUAL OF OPERATIVE SURGERY.
FOURTH EDITION.
Crown 8vo, cloth. With 521 Illustrations, 30 of which are in colours. Price 12/6 net.

HENRY FROWDE & HODDER & STOUGHTON,
Oxford Press Warehouse, Falcon Square, London, E.C. 1.

Now Ready. Price 1s.
APPLICATION OF TRUSSES
to HERNIÆ. Clinical Lecture delivered at King's College Hospital. By the late JOHN WOOD, F.R.S., Senior Surgeon to King's College Hospital. Reprinted from "Medical Examiner."
With Illustrations.
London: Matthews Brothers, 10, New Oxford-street, W.C.

STAMMERING, LISPING, & CLEFT-PALATE SPEECH
By Mrs. BEHNKE. (N.B.—Mrs. Behnke is English.)
Price 1s. net (postage 2d.), of Mrs. Behnke, 13, Earl's Court-square, S.W., who receives Stammerers for treatment. REFERENCES to Medical Practitioners whose stammer Mrs. Behnke has cured, and to others.

STAMMERING
W. J. KETLEY, "Tarrangower," Brondesbury, N.W.
(30 years colleague of late B. BEASLEY, Brampton Park, Huntingdon.)
Those interested in the subject should write for his book, which will be sent post free.

STAMMERING
MOST SUCCESSFULLY TREATED.
RESIDENT AND DAILY PUPILS.
PROSPECTUS AND MEDICAL OPINIONS POST FREE FROM
Mr. A. C. SCHNELLE,
Estd. 1905.] 119, Bedford Court Mansions, London, W.C.

ABSTRACTS OF

The Milroy Lectures

ON

THE TEACHING AND TRAINING IN HYGIENE:

SOME CRITICISMS AND SUGGESTIONS.

By H. R. KENWOOD, C.M.G., M.B.ED., D.P.H., F.R.S.E.,
CHADWICK PROFESSOR OF HYGIENE, UNIVERSITY OF LONDON;
M.O.H., STOKE NEWINGTON, ETC.

LECTURE I.:

THE HYGIENIC TRAINING OF THE SCHOOL CHILD.

MR. PRESIDENT, LADIES, AND GENTLEMEN,—Dr. Milroy was deeply concerned with the betterment of public health, and he endowed the lectureship which I have the honour of holding for this year in order to stimulate research and suggestions to this end. Alive, as he always was, to the importance of the formation of hygienic habits, and to the necessity for the best work of public health practice and research, and realising that these ends can only be achieved through efficient training, he would have agreed that the subject of "The Teaching and Training in Hygiene" is one of prime importance, and properly falls within the objects of the lectureships which he founded. But may I add that I did not select this subject solely because of its great and pressing importance; I was greatly influenced by the consideration that my 25 years' experience, not only as a teacher of hygiene and public health, but also as an examiner at many centres and as a public health official, qualified me to deal with it. I have taken the precaution of testing the views of a large number of experienced workers; and the fact that I find myself in close agreement with almost all of them confirms me in the suggestions and criticisms which I shall venture to offer in these lectures.

NEED OF SOCIAL AND SCIENTIFIC RESEARCH.

The time is opportune for revising the old and devising new schemes for better training. The State has never stood in greater need of the best services in the interests of public health. Indeed, we are approaching an era which will be characterised by better directed effort in a hundred-and-one activities. With an increased willingness to act and a diminished capacity to spend, there will be after the war a very critical inquiry into actual and relative values; and it may be expected that as a result some modifications of our existing public health schemes will result. For at present we fail gravely to make the most of our knowledge of how to prevent avoidable sickness, and much of public health endeavour is misdirected.

We are still ignorant of the cause of many ailments; and so much organised research by well-trained workers is demanded. The type of research needed does not involve pure science alone, but also the sociological side of public health, in which connexion comprehensive investigations are called for. But such social research must be undertaken by those who have the scientific spirit of inquiry, and who do not start upon it with a preconception or bias and to strengthen a particular viewpoint.

At every step along the path of progress and experience in our child welfare work, for instance, we are learning how wide-spread among the conditions adversely affecting the social life of the people are the indirect contributory causes of ill-health among our infants and children; and hence how much more complex and difficult than we once contemplated is this public health problem.

IMPORTANCE OF EDUCATING THE COMMUNITY.

The outlook on public health problems 30 years ago presented a very striking contrast to that of the present day. The public health activity of sanitary authorities in those days paid little heed to the individual and spent itself upon environment. This was conceived to be the main factor in determining health; and the origin of most infectious diseases was sought for in the defective sanitation of the home premises. Now we have turned to the individual factor as of prime concern; and our modern public health policy is becoming more and more an educational campaign—for above all the community needs knowledge. The most effective branch of public health work in which we have been engaged for some years is that concerned with the reduction of infant mortality—and this is for the reason that it is mainly *educational work*, of a direct and personal nature, among the ignorant and the careless.

It is therefore necessary to develop to the utmost the *educational* means at our disposal, for if we go to the root of matters there is but one remedy for most of our social evils (including preventable ill-health) and that is education. While the larger activities of public bodies can assist, the full betterment desired can generally only come through knowledge which the individual himself will apply to his own intimate circumstances.

As the intimate social circumstances of the community present the main difficulties with which we have to contend in our efforts to reduce the misery and economic loss that ill-health entails to the State, the gaze and the hope of hygienists have long been directed towards our schools; for it is recognised that the physical and moral hygiene of the community is mainly dependent upon that early education and training which develops individual desire and initiative.

The provision of a suitable hygienic training at school—the only time when all the citizens are under control for training—is the logical outcome of the appreciation of the above facts, and the essential importance of this demands that I shall devote my first lecture to it.

To indicate the matters relating to their physical well-being which nowadays should be common knowledge among the people would necessitate a statement of considerable length; but allow me to illustrate this demand upon education by a brief reference to the two great problems which sanitary authorities are still endeavouring to solve—the problems of a pure milk-supply and of hygienic housing.

We have heard a great deal in recent years of the need for clean milk. It has been found that legislation and sanitary supervision are but very partial remedies for dirty milk; and everyone who has an intimate knowledge of all the facts shares the view that an essential factor in the solution of the milk problem is the education of the people. The key of the situation is in the hands of the public, who, by failing to demand clean milk and by allowing it to get so much contaminated in the home, are mainly responsible for the evil consequences of dirty milk. There is no sentiment in commercial matters; public demand and competition govern everything; and if once a demand for clean milk became fairly general it would be met by the trade.

Again, will anyone of experience contend for a moment that the evil effects of bad housing are not *mainly* under the control of the tenants themselves? The most effectual cure even for bad landlords is better tenants. Insanitary environment is mainly the product of the man, and individuals without hygienic habits are but little benefited by sanitarily constructed premises. Much of "housing reform" can scarcely be justified unless greater efforts are made to reform the occupants.

There can be no doubt, then, that an increased effort to cultivate "a health conscience" among the masses is the most powerful agent for promoting public health that we possess. It is equally certain that we must start with the child. To equip a child for all his duties, personal and social, in after life, correlational links must be established between lessons and life, the school and the home, the home and the community; in no matter is this so important as with hygienic teaching and training.

So much of a child's lifetime is absorbed by school that hygienic training, even in the best circumstances, must be carried on in the school as well as the home. In many cases, however, the child is entirely dependent on the school for his defence against future physical and moral ills. The most necessitous are the children in poor districts, and so I am mainly concerned with those in our elementary schools, and here I propose to confine myself to considerations as to their training.

A LOOK INTO THE FUTURE.

We are advancing in measured steps towards a goal which can only be discerned in dim outline—the goal of a community well trained in hygienic practice and the performance of domestic duties; and, with conceptions narrowed perhaps by the limitations of our present-day outlook, let us endeavour to foresee something of what those who are privileged to make a close scrutiny later on are likely to witness—in that Utopia which always lies just ahead of would-be reformers.

In the elementary schools hygienic training is as general as the teaching of reading and writing, and its importance appeals alike to teachers and parents. It is now regarded as an anomaly that a school teacher should ever have been permitted to act without some knowledge of hygiene, for if we know nothing of the laws of life, the nature of a child's physical and mental development, and the varying requirements of the developing organism we can hardly achieve its education.

In order to secure for medical inspection a practical remedial outcome certain parents had long been appealed to by school teachers, school nurses, and members of school care committees, and even admonished and penalised by magistrates in order to secure medical treatment for the school child. The policy of securing this maximum parental coöperation grew to be regarded as no less applicable to the educational treatment of the child; and equally necessary to the moral and hygienic training of a large proportion of children. To promote this the Board of Education issued a simple statement to parents, indicating the respects in which their coöperation is needed in the training of their offspring, and adopted many measures to stimulate them to this end.

Thus, under a successful scheme of linking up the school with the home, school teaching and training became more real in the eyes of the masses, and parents grew to more closely ally themselves with the school teacher and the physician in their common aim; and so wastage (mental, moral and physical) in the nation's stock was greatly reduced.

Better training in hygiene was promoted by the raising of the age of compulsory school attendance to 15. It would now be regarded as a criminal act to free a child from trained educational influences at 14—for the lessons then leave off when most needed, and when the power of really grasping much of which is of vital concern has only just set in. There has been a great increase in the number and equipment of technical institutes and continuation schools, at which attendance is compulsory and the teaching of domestic economy, child welfare, and hygiene, is continued. This great concentration of effort directed towards the moral and physical welfare of the child is a very marked feature of development to be noted. This solution of many social difficulties was always knocking at our doors, while we were round the corner looking for other remedies; and experience has proved that, generally speaking, if we properly look after the child the adult looks after himself.

And what is a very evident result of this policy?

The community is now much more intelligent and sympathetic on health matters, and self-knowledge and self-control have grown apace. It helps itself in a hundred-and-one ways where formerly it required administering to.

It is now realised that the all-important matter of public health demands the intelligent coöperation of the whole community. Generations of men and women, who knew what they were talking about, went down to their graves seeking to impress all this and advocating the adoption of the obvious remedy. Owing to the exigencies of party politics all sorts of vote-catching measures took precedence, but it came at last. And now nothing is more remarkable than the independence of the masses and the absence of much of the well-intentioned but ill-directed energy which once obtained. The people have the simple knowledge and training which have so greatly contributed to their health and comfort that they have become convinced hygienists, and so every sanitary problem became greatly simplified.

Great and general as the improvement is, the community has not reached the stage at which indifference, folly, or crime cease to claim some toll of mental and physical incompetence, preventable sickness, and mortality; so that at the distant goal which I scan I see similar problems to those confronting us at the present day, but problems of much reduced proportion. And I can discern a fundamental difference in the line of treatment adopted. The bed-rock circumstances responsible for social maladies are better recognised, and more energy and money are devoted to the radical cure and less to the alleviation of symptoms. With the marked reduction of poverty and ignorance, as the result of better school training, the tinkering with these problems, once so much in evidence, has disappeared in my Utopia.

THE PRESENT POSITION.

And now let us turn to the present-day realities and see what advance we are making towards the desirable goal that I have indicated, and then consider with me whether it is not possible to straighten our course and expedite our steps towards it.

In 1904 a petition signed by more than 14,000 doctors was presented to the Board of Education, urging the teaching and training of hygiene in elementary schools; and in 1906 a large deputation of the British Medical Association and other bodies presented a memorandum to the President of the Board, in which the opinion was expressed that—

"The teaching in hygiene and temperance in public elementary schools is essential for the development of the well-being and happiness of the nation at large."

A provisional syllabus for the instruction of teachers was submitted, and also a scheme of the lines on which instruction should proceed in public elementary schools. It seemed to me at the time that both the syllabus and the scheme made too great a demand upon the teachers and the taught; and that while possessing many excellent features, the scheme was, in its reference to matter which should be taught to elder children, more suitable (from the standpoints of its scope and comprehensibility) to the teacher than to the elementary school child.

In 1906 the Board of Education published a suggested scheme for teaching hygiene and temperance to the scholars attending public elementary schools. This scheme possesses some admirable features: it embraces many of the suggestions of the medical scheme above referred to, but it is far less ambitious. But despite the fact that the Board has drawn attention to the "paramount claim" of hygiene, and to the fact that "the proper teaching of hygiene is most urgently called for" (1906), the Code of Regulations of the Board for Elementary Schools in England, can as yet only *advocate* such instruction. This is not due to any lack of appreciation of the prime importance of the subject. Indeed, the Board has greatly promoted hygienic *observances* at school and has made a general provision for physical exercises, but it has been difficult to provide a sufficiency of suitably trained teachers.

So, as there are still many teachers in the elementary schools throughout the country who have not received any training in hygiene, it follows that there are many elementary schools, especially in rural districts, in which no training (apart from the correction of dirty habits and conditions and the object-lessons of the school premises) is provided for the children. In those schools where hygiene is now being taught, though good intentions are not lacking, the objective is not being reached in a large proportion, and these poor results are due to the unreality of the teaching.

I have interviewed many head masters and head mistresses of elementary schools wherein it is *claimed* that hygienic teaching and training are provided, and I find myself unable to attach real value to most of it. The teacher's mental attitude towards the subject varies. Generally speaking, it is more sympathetic among the women than among the men, and there can be no doubt that girls come off better than boys in the matter of hygiene. Some are openly intolerant and attach little, if any, value to it; others are more sympathetic, but would accord hygiene a no more prominent place than that which it can find, incidentally, in the training in domestic economy or elementary science; others base a claim for hygienic instruction on nothing more than the correction of bad habits and occasional remarks; many others find time for some special training in hygiene, and of these some work to a practical and simple scheme, while others cloud the issues in a crude and artificial syllabus which must lead to utter confusion.

Where hygiene is treated as a separate subject the boys and girls generally receive some instruction from Standard V. upwards. The instruction in domestic science and housewifery for the older girls (a most valuable provision) is much more general; and as here is the only opportunity of impressively illustrating some essential facts of domestic hygiene the teachers should be qualified in this latter subject.

The problem of supplying a useful training in hygiene to every elementary school-child is a difficult one, but, as Democritus has said, "There is but a single way of making great difficulties small—that of looking them straight in the face."

AIMS OF TRAINING IN HYGIENE.

Let us first consider the object of this training and its appropriateness to an educational scheme. The training in the ordinances of healthy life is now generally recognised as an essential part of citizen training. As Elkington has so well said—

"Hygiene is a subject which fulfils admirably the teaching requirements of seeing, reasoning, and remembering; it lends itself to both training and instruction; and possesses high material and ethical value. When it is added that the fullest regard must be paid to the physical health of the child in order to obtain the best mental reaction, it must be admitted that hygiene is a close and natural ally of the pedagogue."

The school age is the age of habit-formation; and the establishment of good habits, promoting physical and moral health, is the chief concern of hygiene. No later admonitions from any source, no intimate knowledge later acquired, are of such value as those "memories of the lower centres" which may be so readily grafted on the child. Equally are these the years of character formation; and so during the school age the individual is in no small measure either made or marred.

Firstly, permit me to state a few principles with reference to hygienic training in its application to elementary school children before I outline the simple scheme for such training that in my judgment would best meet the case.

STATEMENT OF PRINCIPLES.

Hygiene has been well defined as the "Gospel of bigoted cleanliness." A child trained in cleanly ways of action and of thought will resent dirt at home, will carry with him a far stronger safeguard against dirtiness in his habits and a greater measure of self-respect than if he were carefully and

laboriously provided with a complete and admirably designed panoply of aphorisms intended to meet every thinkable contingency in school life and afterwards. Now those who have had experience entertain no doubt that the poorer children of this country are far cleaner to-day than they were 10 years ago. It is certain that school agencies are mainly responsible for this valuable result. But has it been obtained by teaching? Certainly not. It has been secured by corrections and object-lessons. It is hygienic practice that is needed; and as to precept, it is sufficient to point out in the simplest possible language the good that comes from obedience to the laws of health and the harm that comes from neglecting them. Certain rules and facts have to be applied in a common-sense way to every-day life and environment, and so, in the training of the school child, an eye must be kept on the actual circumstances and needs of the home. We must seek to develop "a health conscience" by checking bad habits and encouraging good ones. *That is the goal of our hygienic training at school.*

If we could secure that every teacher was a skilled and keen *trainer* in hygienic observances little more would be needed; and I hold the view very strongly that average girls and boys up to 14 years of age are likely to take but little active interest in their own bodies by *teaching* them hygiene.

When the elementary school teacher informs me that hygiene is taken in elementary science I conclude that probably nothing of real service is being done from the standpoint of hygienic training. It means that there is "no time" for it, and so it is shelved in the elementary science laboratory. I do not know why hygienic training for elementary school children should be treated as a science subject any more than housewifery; for them hygiene is essentially an art—the art of healthy living. The science of hygiene is not for young children; to treat it in elementary science is to obliterate it.

Nothing more than simple statements upon the laws of healthy living should ever be made, and these only for those in the last two standards; explanations must be plain, simple, and direct, and not befogged with any unnecessary details; and there must be no elaboration or artificiality of material used—it must be simple, familiar, and practical. To illustrate my contention: It would be a stupid waste of time and faulty in principle to attempt to teach scholars under 14 years of age the composition of the air, the structure of the lungs, and the mechanism of respiration in order to impress upon them the importance of fresh air; rather should they be told something of the results of common experience and be trained by the object lesson of the open window and the maintenance of fresh air conditions in the class-rooms.

School teachers ask for some scheme which will encroach as little as possible upon an already over-burdened school time-table. But if nothing is dealt with but what is of real practical value to the scholar; if we do not make the mistake of calling simple things by elaborate names and of attempting to treat on a scientific basis facts which stand in no need of such treatment; and if this training is spread over the whole school curriculum, it should make but little demand upon the time or energy of the teachers, either in acquiring the necessary knowledge or in communicating it to the children.

SUGGESTED SCHEME.

What, then, is the suggested scheme for obtaining the best possible results under the restricting conditions imposed by an already crowded syllabus and the early ages of the scholars? The practice of hygiene and its precept should permeate the whole school life. Up to and including Standard III. I would advocate nothing more than the *training* by object-lessons and corrections, but in Standards IV. and V., in addition, the nature and importance of the laws of health should be simply and tellingly impressed in occasional short talks, which will never seek to do more than to produce a particular practical result in training. The ever-present aim would be to *train*, and all efforts would be focused on that.

The aim of these incidental talks would, where possible, be impressed upon the scholars by means of object-lessons (as, for instance, the correction of a dirty boy, the correction of a dirty habit, the opening of a window, &c.), or an introductory story may sometimes serve. All technical or scientific terms would be avoided in these talks, which would always be illustrated by facts and objects which fall within the range of school and home life. Simple sanitary devices would be illustrated upon the school premises, and their uses explained; and some of the pictures and texts on school-room walls should relate to hygiene—for "the memories of children are mainly visual, and the visual picture of the school-premises often forms an unconscious example in after-life for guidance."

These short, informal, homely talks, would be carefully graduated so as to appeal to the different standards.

It is the general experience that young scholars are far more impressed by a talk than by a set lesson; and if the brief conversational digression is introduced during the time allotted to a set subject, as an impressive opportunity occurs, it rivets attention and has almost a recreative value. As repetition is necessary to lasting impressions, questions would be asked (and invited) from time to time; and if something has to be done, each student should be made to do it.

Attention may here be drawn to the correlation of hygiene with certain school-subjects. In this way the teacher who is alert can find opportunities of instilling the lessons of hygiene; and they can be set for the weekly compositions, which are now, very properly, a part of the scheme of elementary education—in which case an early opportunity would be taken, in a supplementary talk, to deal with facts which do not appear, from the compositions sent in, to have been sufficiently grasped.

I would advocate nothing more than the above scheme for *boys*, even in the higher standards, if it could be guaranteed that all school teachers would be keen and alert to make the most of the foregoing scheme; but I realise that it is *policy* to put hygiene on the school time-table, as a set subject, for the last two years. Thus, the training of boys and girls during the last two years would be carried a step further. The subject would be taught (on purely practical lines) as hygiene, and not cloaked in any other subject—certainly not in Elementary Science, and it would not demand more than two half hours a week.

Nothing is more impressive to the scholars than when one of their number is singled out for some special duty. It would therefore be a most telling means to our end if a scholar in each class-room occupied by children over 10 years of age were constituted the "sanitary monitor" for the week. It would be his duty to see that the ventilators were open, that the class-room was well flushed with fresh air upon every available opportunity, to report if cleanliness did not obtain, if dust had accumulated, and if all sanitary demands were not met in the use of the sanitary conveniences provided. Such practices have a wonderful educational effect because they are so impressive. The Board of Education favours the school sanitary monitor, and even recommends "an occasional practical lesson of cleaning," but he is not to be seen in the majority of schools.

Though I am not an advocate of "Health Readers," each child might usefully be provided with a short printed list of rules for his conduct at school, at play, and at home; and these might be explained by the school teacher as occasion permitted or circumstances demanded.

The training of a child in the right way of doing the right thing, coupled with his natural assertiveness, will generally ensure that much useful practice is transferred to the home. But in special cases the coöperation of parents in the home should be enlisted, either by the school teacher, or by the assistance of others who are working in the cause of child-welfare.

GROUND COVERED BY THE SCHEME.

A suitable detailed scheme requires to be prepared with great judgment if it is to be kept at once elementary and practical. The ground covered by such a scheme should comprise—

(A) Training in formation of hygienic habits, including presentation of hygienic object-lessons.

(B) Simple statements upon elements of personal and domestic hygiene.

(C) Additional training for elder girls. The training in the duties of keeping the home (including food catering, marketing, and cooking; laundry work; needlework; and care and management of children).

Under (A) the training would permeate the whole school life.

It would demand correctional observations or talks, suitably graded to the standards. All scholars will be maintained at a fair standard of cleanliness of skin, nails, hair, teeth, and clothing. (The necessity of a weekly wash and change of underclothing will be impressed; dirty scholars will be sent to the lavatory and, if necessary, shown how to cleanse themselves; bad and dirty habits—namely, spitting, bad posture, untidiness, &c.—will be corrected. If school meals are provided, clean hands, good chewing, the drinking after the meal, and avoidance of waste will be inculcated.)

Object-lessons of the school premises would embrace cleanliness and cleaning, tidiness and brightness, the open window, the proper state and use of lavatories, closets, &c.

The set teaching and training under (B) would be restricted to the last two standards.

Simple instruction and advice would be given on the following matters:—

Dirt: its dangers (communicable disease is due to invisible dust, or "germs"). Dirt on the body and in the home—the need for its frequent removal; the cleaning of rooms (damp dusting); the burning of organic refuse in the home.

Air: Dangers of dirty and stuffy air; the importance of maintaining through-ventilation in living and sleeping rooms—the simple means of providing for this; overcrowding; foul odours—their sources and dangers.

The evil effects of bad lighting.

Water: How to avoid contamination in the home and its precincts.

Food: The necessity for fresh and untainted food—conditions of proper storage, need of cleanly utensils for food and drink, temperance in food and drink, the dangers of alcohol.

Dampness of dwelling, bedding, &c., and its evils.

Vermin on body and in home, preventive measures and remedies.

The elementary facts as to the nature and care of sanitary fittings requiring periodical attention (dust-bins, gullies, traps, sinks, water-closets, and earth-closets in rural districts). Simple references to duties of individuals in respect to the health of the community, and to the ways by which the sanitary authority endeavours to guard the peoples' health.

How infectious disease spreads, precautions to be taken.

What has been commenced in the manner indicated should be extended and supplemented by more formal and slightly advanced treatment in the Higher Elementary, Secondary, and Continuation Schools.

THE TRAINING OF THE TEACHER.

A teacher must be taught both how to maintain hygienic conditions at school and how to train the school child to hygienic observances; and this must be kept in view in arranging his training. In recent years the Board's final examination for students in training colleges has included a paper in hygiene, and the Board has drafted a model syllabus of the course of training in this subject; but alternative syllabuses may be approved of.

The model syllabus is solely intended to familiarise the future teacher with the general principles of hygiene, with the view to their practical application by him in the interests of the children. This guiding syllabus is very helpful and the advice offered is excellent; but I would presume to suggest that it is capable of some reduction without the school teacher losing any practical value from his study of the subject. But he is generally more efficient in maintaining hygienic conditions at school than in training and teaching the school children; and it is in this latter respect that his training lacks reality.

In common with many colleagues whom I have consulted I find, generally speaking, that the knowledge of hygiene among school teachers who have been trained in the subject is *unpractical* and *unreal*; it is essentially theoretical, and lacks appreciation of the relative importance of the numerous facts that have been acquired. It is essential that we do not lose sight of the facts that the maintenance of hygienic conditions at school, the training of children in hygienic observances, and the simple hygienic precepts suitable to the elementary school child, only demand a small amount of real, practical, and clearly arranged knowledge; and if the training were more directly based on these considerations the practical issues would not be so overshadowed as at present. Figuratively, the school teachers now lose themselves in the maze of facts which they penetrate but do not sufficiently explore; and the best remedy that I can suggest, having regard to all the circumstances (more especially those of the crowded time-tables both at the training college and the elementary school), is not to carry them much beyond the essential facts of value in practical application.

But a mere didactic statement of these facts will not suffice for the teacher's needs; it is necessary to arouse interest, sympathy, and respect for the subject; and so with him hygienic demands must be scientifically justified, and the second-hand information from lecturers and text-books must be verified by experiment and observation. The teaching and training must be direct and practical; indeed, half of the time given to the subject should be devoted to practical work, and with his trained mind the teacher could assimilate much "short-circuit teaching." Moreover, the subject demands an intimate knowledge of, and a full regard to, the home circumstances of the class from which the scholars come, and it is essential that arrangements are made to provide this. By thus concentrating upon practical needs he will be able to direct his knowledge more successfully to the goal of training, and the detailed scheme and method of teaching and training the school child which I should be disposed to favour would be that of a well-trained and enthusiastic school teacher who has evolved (under the expert guidance initially given) the best working scheme under the restricting conditions of elementary education.

INFANT HYGIENE AND MOTHERCRAFT.

When and how are those upon whom later we shall depend to bear and rear healthy children to receive instruction in this important function? I must confess to some doubt upon the policy of providing any of this particular form of training before the age of 14 is reached. If we are to have the future mothers under control after the age of 14 I should much prefer that this training is provided then. But when *it is* provided for elementary school children under 14 the subject of infant care should be linked up with that of domestic economy, and the instruction should be given either by a specially qualified school mistress acting for a group of schools, or (better still) by a local official health visitor, where one can be found, who possesses (praeceptor nascitur non fit) the art of conveying some selected essentials of her knowledge to young girls.

The health visitor, or a special teacher giving part-time services at a child-welfare centre, can best make the necessary arrangements for illustrating this branch of training. Only a person with experience of infant care in its practical aspects, can properly assess the important facts to be demonstrated or impressed; and classes of not more than 30 should be informed at a weekly session of 30 minutes during the last half-year of compulsory school attendance. Each child must perform the practical work set out, and during the course questions should be set and the written answers used as indicative of the revision work demanded.

The equipment for much of this teaching will be little more than a large washable doll and a few articles that can readily be taken to the school or provided there; but a few of the lecture-demonstrations should, if possible, be given at a child-welfare centre, where a real baby can be handled.

I would make it compulsory upon all young females who attend the evening continuation schools (which are destined to be greatly extended in the near future) to obtain at the same time a knowledge of infant hygiene and mothercraft.

GUIDANCE OF BOARD OF EDUCATION.

We are aware of the keen interest which Sir George Newman, the Principal Medical Officer of the Board of Education, has always shown in provisions for the training of school children in hygiene and of the difficulties which have to be faced, and we have seen that good work has been done by the Board during recent years to promote progress in this direction. But for this training we are dependent on the teachers in the training colleges, and they must replace the faulty methods which are proving ineffective by those which are better designed to produce elementary school teachers who are practical and practising hygienists. The examination at the training colleges must also be better designed to test this practical training, and school inspectors must see that the scholars at the schools are receiving the benefits (qua training) of revised methods.

The Board of Education may be depended upon to lose no more precious time than is necessary in supplying the further guidance which experience has shown to be required in the training of school teachers to a greater measure of effectiveness in the hygienic training of school children, and so hastening the day when every elementary school child in the country receives the great benefit of a real training in this subject.

ROYAL SCHOOL FOR DEAF AND DUMB CHILDREN, MARGATE.—In order to assist education in lip-reading for sailors and soldiers rendered deaf through war service, the committee of the Royal School for the Deaf, Margate, have presented to the Ministry of Pensions, as a hostel for the period of the war, a furnished residence in the school grounds, fully staffed for domestic care and instructional purposes. A minimum charge for food only will be made from the supplementary pension allowances paid to the men who are willing to participate.

CENTRAL MIDWIVES BOARD FOR SCOTLAND.—At a special board meeting held at 50, George-square, Edinburgh, for the hearing of penal cases an investigation took place on a report by the Local Supervising Authority of the deaths of two patients from puerperal septicæmia. Two certified midwives appeared in answer to the charges of failure to send for medical assistance and negligence in keeping registers of cases, records of pulse, temperature, &c., as required by the rules, and the charges being proved the secretary was directed to remove the names from the roll of midwives and cancel the certificates.

TACHYCARDIA:

OBSERVATIONS UPON ITS OCCURRENCE IN THE ENTERIC AND OTHER FEVERS.

BY H. FAIRLEY MARRIS, M.R.C.P. LOND.,
MAJOR, R.A.M.C.

TACHYCARDIA occurring during the convalescence from the enteric fevers falls into three classes; each of these can be readily recognised by bedside observation, and thus appropriately treated.

During the last two years I have examined a large number of cases belonging to the enteric group of fevers, in many cases paying special attention to the heart-rate. The majority of these cases was characterised during the febrile period by a relatively slow heart-rate; some developed tachycardia *gradually* during convalescence, a few *abruptly*, whilst the minority were conspicuous by the presence of rapid heart action *throughout the disease*.

Scope of Investigation.

With a view to determining the nature of the tachycardia present the usual signs and symptoms of heart failure were frequently sought for, the cardio-vascular system was repeatedly examined, and in addition further observations were made which appear to throw light upon this problem. These further observations will now be described, and the reasons given which led to their application. Briefly they are: the sleeping pulse-rate, arrest of respiration, localisation of apex beat of heart, and effect of posture upon heart-rate.

Sleeping pulse-rate.—A case under the care of one of my colleagues had been notified as having a persistent heart-rate of between 130 and 140 beats per minute after an apparently mild attack of paratyphoid. Had been kept to bed for a month after commencement of convalescence; no diminution in heart-rate.

Careful examination failed to reveal any abnormality in size, sounds, or rhythm of heart; bases of lungs clear. Attempts were made to slow heart by compression over carotid artery and by draught of cold water with view to stimulate vagus nerve, but without avail.

The polygraph tracing was continued for a considerable time, when suddenly the heart-rate was observed to drop from 120 to 70 beats a minute. Respiration likewise slowed. *The man had gone to sleep.* (See tracing of Case 1.) The tracing was continued for a considerable time; then patient was quietly awakened, tachycardia and increased rate of respiration *immediately returned*.

In consequence of this observation, all cases showing rapid heart action frequently had the pulse-rate determined when asleep, and in this paper this observation will be referred to as the "sleeping pulse." A series of observations upon healthy men of between 20 and 30 years of age with an average waking pulse of 72, showed a sleeping pulse of 65 per minute.

Arrest of respiration.—Breathlessness has long been recognised as evidence of cardiac weakness, when such causes as morbid blood states and physical conditions or diseases of the lungs themselves have been excluded.

With a view to measuring breathlessness of patients the following method was employed. The period of time was accurately measured by the polygraph, during which the subject could suspend his respiration, beginning at end of quiet *expiration* and ending with next *inspiration*. This observation will be referred to as "*Arrest of Respiration.*" Similar observations upon healthy controls showed this period to vary between 20 and 30 seconds.

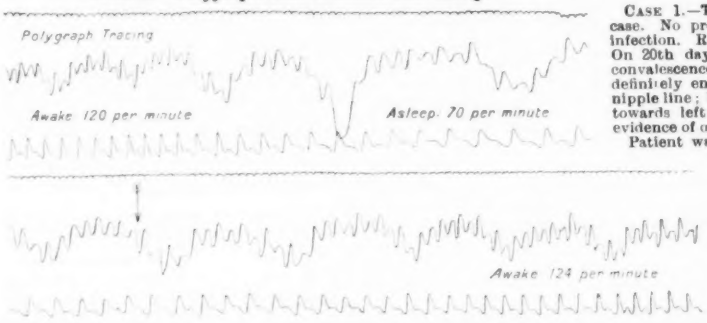
Localisation of apex beat of heart.—The frequent difficulty in localising the apex beat of the heart in cases of the enteric group was quickly realised, and this observation will be fully dealt with in Case 3.

Effect of posture.—The effect of posture upon heart-rate was studied likewise the effects of a tight abdominal binder upon heart-rate, when in upright position. In health the assumption of the upright position usually causes a 10 per cent. increase in rate above that of recumbent position.

Description and Discussion of Cases.

Four types of cases showing tachycardia, upon which these observations have been made repeatedly, will now shortly be described and then discussed. In Case 1 the tachycardia is observed to arise in a permanently damaged heart; in Case 2 the tachycardia remains only while the heart is poisoned; in Cases 3 and 4 the tachycardia will be seen to be secondary to other causes.

CASE 1.—*Polygraph Record Awake and Asleep.*



Tachycardia Cardiac in Origin.

CASE 1.—True typhoid (*B. typhosus* in urine). Severe case. No previous history of cardiac disease or rheumatic infection. Rapid heart action was noted throughout disease. On 20th day soft mitral systolic bruit was first heard; as convalescence was established area of cardiac dulness was definitely enlarged. Apex beat in 5th space 1 inch beyond nipple line; bruit became more marked and was propagated towards left axilla. Examination of lungs invariably gave evidence of œdema, more marked at left base.

Patient was discharged as stretcher case on 70th day from onset of illness. Three months later I was informed he was suffering from mitral regurgitation

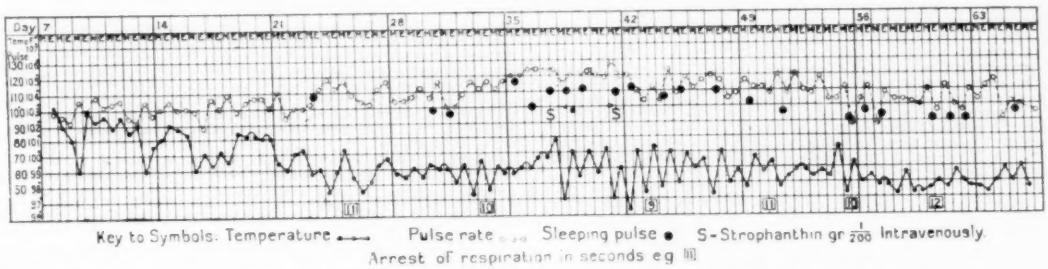
The points to be noticed in this case are:—

1. Occurrence of valvular disease and of necessity a damaged myocardium in case of true typhoid.
2. Throughout illness heart-rate was observed to be rapid.
3. Pulse-rate was rapid when observed during sleep.
4. Breathlessness was always present and arrest of respiration never exceeded 12 seconds.

Comment.—In above case of valvular and myocardial disease arising in a case of typhoid fever the heart-rate was observed to be unduly rapid in waking and sleeping states throughout. The arrest of respiration is less than that observed in healthy hearts. *The tachycardia is cardiac in origin.*

This type of tachycardia is due to toxic irritation or degeneration and consequent weakness of the myocardium, which necessitates an increased heart rate in order to maintain an efficient circulation; in addition there is considerable evidence that the heart muscle has been permanently damaged by the infection.

CASE 1.—*Composite Chart of Temperature, Pulse, and Respiration.*



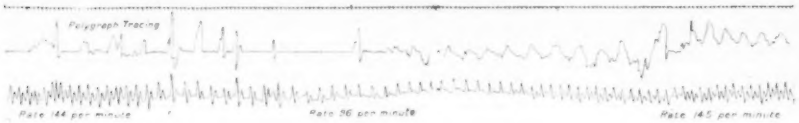
Tachycardia Toxic in Origin.

CASE 2.—Severe case of paratyphoid B (*B. paratyphosus B* in fæces). Pneumonic type, rapid heart action and rapid respiration were observed for a considerable time (4 weeks). On 15th day of illness tachycardia present might have been termed phasic as shown in polygraph tracing. A rate of 144 per minute alternated with a slower rate of 96 per minute, each phase occupying some 20 seconds. During this time patient was in critical condition, being semi-conscious for following week.

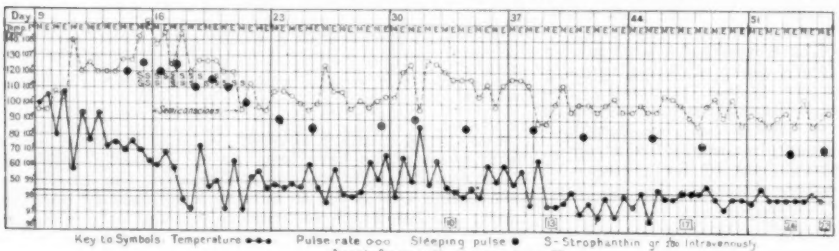
With a view to arresting the tachycardia 1 250 gr. of strophanthin was injected intravenously and within ¼ hour the higher rate was obliterated, but was observed to return 3 or 4 hours later; successive injections of strophanthin were given. Invariably the higher pulse-rate disappeared for a time. (Extreme difficulty was experienced in taking records, the rhythm is uncertain.)

By 22nd day the phasic tachycardia had vanished and with return of consciousness, convalescence was speedily gained, the lung condition cleared up, and an excellent recovery ensued.

CASE 2.—*Polygraph Record on Fifteenth Day of Illness.*



CASE 2.—*Composite Chart of Temperature, Pulse, and Respiration.*



The sleeping pulse throughout illness is shown on chart. During critical period a rate of 120 a minute was frequently recorded, whereas during convalescence this had fallen to 70 per minute. The arrest of respiration increased from 10 to 24 seconds before discharge. In upright position the rate was observed to be 82 per minute.

Comment.—In the early stages the tachycardia present is observed both during waking and sleeping states. The arrest of respiration is unduly curtailed. *The tachycardia is toxic in origin.*

This type of tachycardia is due to the poisoning of the heart muscle by toxins generated by the infection. The action of these toxins may be either by reflexly stimulating the nervous mechanisms of the heart or by increasing the irritability of the heart muscle, which is seen to regain its normal function with the termination of the infection. As convalescence is established the heart-rate both during waking and sleeping states, also in erect posture, is that seen in healthy hearts. The cardio-vascular system has completely recovered. The man was discharged quite well ten weeks from the onset of his illness.

Vaso-motor Tachycardia.

CASE 3.—Moderately severe case of paratyphoid A (bacillus isolated from blood). Polygraphic records were taken daily throughout the disease. The apex tracing was always taken from a fixed point, over fifth space and just below and internal to left nipple. A brief description of the case is as follows:—

1st day of disease: Frontal headache, languid. 2nd: Severe headache, general aches and pains. Flushed, eyes suffused, sweating, offensive breath, tongue furred, lungs clear, heart sounds clear. Pulse big volume, good tension; by evening pulse dicrotic. Polygraphic records showed a normal rhythm, positive apex beat; arrest of respiration 10 seconds in morning, only 6½ by evening. Few rose-coloured spots on abdomen. 3rd: Very ill, many spots, abdomen tender, especially over splenic area, little diarrhœa, heart sounds soft, apex beat gone. 4th: Abdomen distended, spleen felt, photophobia. 5th: Abdomen distended, systolic bruit. 6th day: Epigastric pulsation recorded, apex beat absent, diarrhœa stopped, few fine crepitations at base of left lung, systolic bruit. 7th: Pulse very dicrotic, œdema both lungs, no apex beat, systolic bruit. 8th: General improvement, abdomen less distended and tender, spots go e, spleen palpable, no apex beat. 9th: Improvement maintained, heart slow, no apex beat. 10th: Epigastric pulsation less, no apex beat. 11th: Epigastric pulsation gone, no apex beat.

12th day: Return of apex beat, arrest of respiration 14 seconds, bradycardia, lungs quite resonant, systolic bruit gone. 13th, 14th, 15th: Rapid improvement, apex beat well marked. Convalescent. 16th–29th: Bradycardia passing off, apex beat normal. 30th–40th: Pulse-rate and blood pressure rising, sleeping pulse slow. 41st–46th: Up, "nervous," tremor, sweats, cold clammy hands, dermographia like a D.A.H., blood pressure 130–140 mm. Hg, tachycardia absent during sleep.

47th: Discharged. Heart: Size, sounds, rhythm, normal; tachycardia when awake.

The following points were noted:—

The apex beat, which in the early days of the disease was felt and recorded in normal position, had disappeared by 5th day, and examination of heart at this time showed a faint systolic bruit at point from which apex beat had disappeared. Synchronously with this disappearance of apex beat, epigastric pulsation was observed and recorded, all signs pointing to dilatation of right heart. Towards end of second week epigastric pulsation had disappeared and synchronously with this disappearance the apex beat reappeared in normal situation, both these signs pointing to restoration of healthy tone to heart muscle.

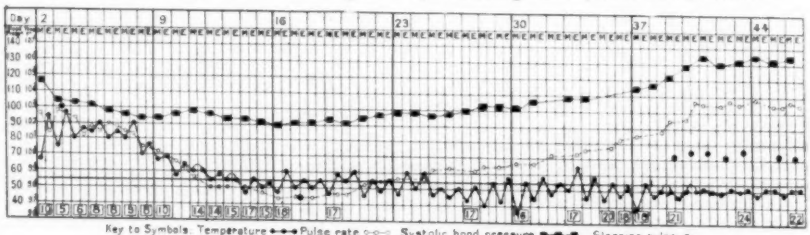
Examination of lungs during period when heart was observed to be dilated revealed signs of œdema at bases, more marked on left side.

The pulse-rate showed the usual rapid action at onset, gradually giving way to relatively slow rate so characteristic in enteric group of fevers, and as convalescence was approached, tachycardia supervening step by step. By time convalescence was established pulse-rate in erect posture was 120 to 125 per minute. The application of tight abdominal binder slightly increased rate and added to patient's discomfort. The sleeping pulse during period when tachycardia was observed is seen to be slow. The arrest of respiration at time of discharge is seen to have gradually approached the normal. By this time lungs were free from œdema.

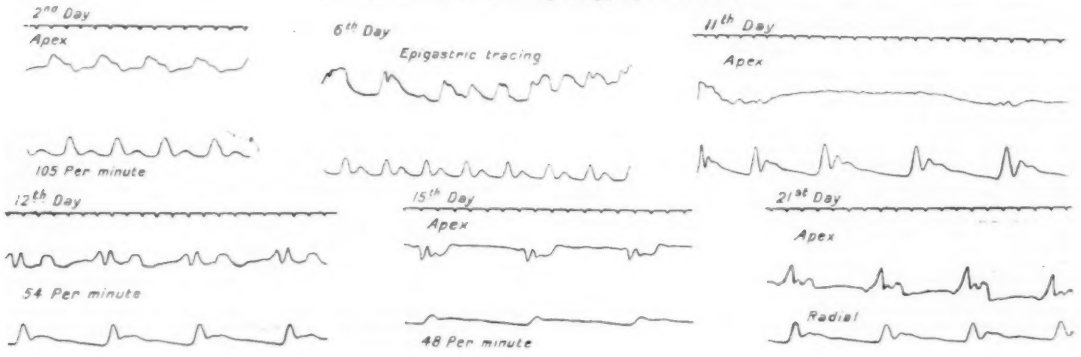
A study of the blood-pressure curve throughout the disease shows the characteristic fall during the early stages of the disease and a return to normal by end of fifth week; later, with onset of tachycardia a height of 130 to 140 is reached.

The general condition of patient during convalescence might be described as "nervous." Generalised tremor present, sweats common.

CASE 3.—*Composite Chart of Temperature, Pulse, Respiration, and Blood Pressure.*



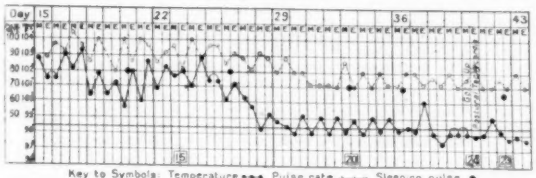
CASE 3.—*A Series of Daily Polygraph Records.*



extremities cold and clammy, dermographia marked. All the signs point to a disordered vaso-motor mechanism.

Comment.—In the early stages of the disease the heart is poisoned, as shown by evidence of dilatation given above. This is especially seen in right heart, and signs of its failure were shown by œdema of lungs. All signs of this had passed away by end of second week. During convalescence heart was normal in size, sound, and rhythm. The sleeping pulse during this period was that witnessed in healthy

CASE 4.—*Composite Chart of Temperature, Pulse, and Respiration.*



hearts. The effect of posture upon heart-rate was not abnormal. The arrest of respiration likewise was that seen in sound folk. *The tachycardia is not cardiac in origin.*

The interpretation of this type of tachycardia is uncertain. The rhythm apparently originates in the normal manner. The high rate is hardly likely to be due to excitement, understood as emotion, as I have recorded this type for hours at a time without observing any change except when the patient slept. Hyperthyroidism may be ruled out, as in this condition the heart is unchanged during sleep. The phenomenon of sleep is so little understood that no explanation can be offered of the cessation of tachycardia during this condition. The tachycardia observed during convalescence is part and parcel of a condition associated with a disordered vaso-motor mechanism and may be conveniently described as vaso-motor tachycardia.

Postural or Atonic Variety of Tachycardia.

CASE 4.—Moderately severe case of paratyphoid B fever (bacillus isolated from blood), characterised by considerable abdominal distension during acute stages. Examination of heart in early days of disease showed evidence of dilatation similar to that described in Case 3. From 33rd day onwards sleeping pulse and arrest of respiration were observed to be normal, and the heart appeared to be sound in all respects. Despite this, on leaving his bed for the first time on 40th day and assuming upright position patient at once complained of feeling giddy and faint and pulse rate was observed to be 150 a minute. A tight abdominal bandage was applied and pulse-rate quickly fell to 120 per minute; patient then expressed himself as feeling more comfortable, but on releasing bandage former high rate of pulse returned, together with previous feelings of discomfort. On resuming recumbent position pulse-rate immediately fell to 90 per minute. This condition was observed to be present in a lessening degree during next three weeks, at end of which time convalescence was established and the tachycardia had vanished.

Comment.—A case of tachycardia occurring after moderately severe attack of paratyphoid fever in which a considerable amount of abdominal distension was present. The heart itself was normal in size, sound, and rhythm; pulse rate always slow during sleep. The tachycardia was only observed when patient was in upright posture, and could be controlled by applying tight bandage to abdomen—that is, the region of body seen to be atonic during acute stages of disease. *The tachycardia is not cardiac in origin.*

The tachycardia may be described as the postural or atonic variety. This type of tachycardia is induced by the temporary dilatation of the great abdominal veins, leading to a depletion of the blood-supply to heart and brain. The symptoms, both subjective and objective, are materially reduced when firm support is given to the abdominal contents by a firm binder. The polygraph records give no certain evidence as to whether or not the rhythm of the heart is originated in the normal manner.[1]

Classification of Cases.

The foregoing observations justify a classification of the tachycardias occurring during the convalescence of the enteric group of fevers into the following three groups: (1) Due to cardiac lesions; (2) postural or atonic; (3) due to general instability of the vaso-motor nervous system.

In a series of 650 cases of the enteric group of fevers tachycardia of sufficient degree to attract attention was observed in 75 cases: 5 of these were judged to be cardiac in origin, 40 were due to vaso-motor instability, 10 were of the postural variety, and the remainder presented features suggestive of Groups 2 and 3.

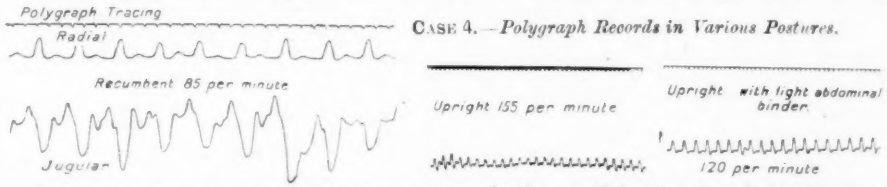
During the course of this investigation similar observations were carried out upon the cases of tachycardia occurring in other febrile disorders. In the fatal cases, such as diphtheria, cerebro-spinal meningitis, miliary tuberculosis, scarlet fever, the tachycardia was found to be of the cardiac variety. The majority of the non-fatal cases belonged to the vaso-motor group and occurred during the convalescence of such diseases as diphtheria, scarlet fever, trench fever, influenza, and pyrexias of obscure origin. A few of the postural variety were encountered in obscure febrile disorders with gastro-intestinal signs and symptoms.

Treatment.

Those cases of tachycardia judged to be cardiac in origin were treated as heart cases and were transferred to England.

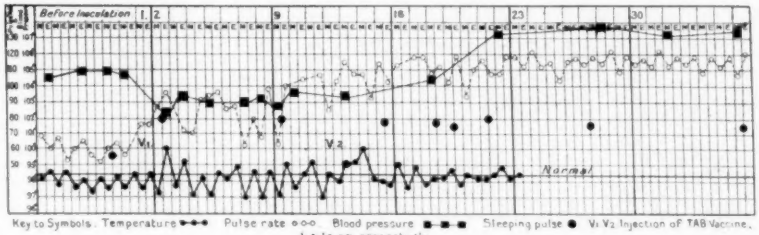
Case 2 can be reasonably regarded as having benefited by the use of strophanthin; a case following upon a typhoid infection, and showing what appeared to be a similar phasic character likewise responded to the drug. Out of 6 other severe cases showing rapid heart action during the acute stages of an enteric group infection 3 responded and the heart was slowed for a time; the remaining 3 cases failed to respond and died of heart failure. In the non-typhoid cases no response was ever obtained, and so lately the drug has been abandoned.

CASE 4.—*Polygraph Records in Various Postures.*



Those cases judged to belong to the vaso-motor variety of tachycardia were not confined to bed; a gradually increasing amount of exercise, massage, and the use of ammonium bromide appeared to hasten convalescence. Those cases belonging to the postural or atonic variety were not confined to bed; a few benefited by the application of an abdominal binder. Massage and the use of tonics appeared to hasten recovery.

CASE 5.—*Composite Chart of Temperature, Pulse, Respiration, and Blood Pressure.*


Before Inoculation
V1
V2
Normal
Key to Symbols: Temperature ●-●-● Pulse rate ○-○-○ Blood pressure ■-■-■ Sleeping pulse ● V1 V2 Injection of TAB Vaccine, ½ & 1 c.cm respectively

Investigation of Cardio-vascular System after Inoculation.

Further light is thrown upon the vaso-motor variety of tachycardia by certain investigations carried out by myself upon the cardio-vascular system during the first few weeks after inoculation against the enteric fevers. Some 20 cases have been investigated, and two of these are particularly illuminating and are here described.

CASE 5.—Uninoculated man, aged 25, admitted as suspect case of typhoid. After five days' fever he was to all appearances fit and well; kept in hospital doing duty. Blood, fæces, and urine repeatedly examined; declared bacteriologically and serologically free from infection by enteric group of organisms either recently or remotely. He was then inoculated 16 days after termination of his fever.

For six days before receiving initial dose of 0·5 c.cm. of the T.A.B. vaccine he was kept to his bed, and, as seen by the chart, blood pressure, waking and sleeping pulse rates were normal. Heart

[1] In civilian practice I have examined a few patients wearing belts for enteroptosis, movable kidney, &c. In all some degree of tachycardia was present when the belt was removed. In addition the various subjective phenomena from which they suffered were in abeyance when wearing their belts. The question arises whether in such cases the relief of symptoms occasioned by a suitably adjusted belt is not in part due to the improvement in the circulation usually observed.

in every way sound. A severe reaction followed initial dose. The chart shows that blood pressure fell abruptly; pulse-rate rose but erratically. Eleven days later second dose of vaccine of 1 c.cm. was given. Thence onwards blood pressure curve unduly high; waking pulse-rate 110 to 120; sleeping pulse-rate normal.

By this time general condition of patient was similar to that described in Case 3—namely, tremor, sweating, clammy hands, dermographia, and tachycardia. He was detained for a fortnight and remained much the same. The effect of exertion was then studied, and after slight effort breathlessness, palpitation, and discomfort were noted. Evacuated as case of debility.

A precisely similar series of observations was obtained in one other case of inoculation with vaccine from a different source.

The inference is that, not only active infection by organisms of enteric group, but also an emulsion of dead bacilli may give rise to a vaso-motor tachycardia. I have examined a considerable number of cases described as D.A.H., and the resemblance between these and Cases 3 and 5 is striking.

As I have shown, a similar condition of vaso-motor tachycardia has often been observed to occur after other febrile disorders, and so it appears to throw some light upon the origin of certain of these cases.

To-day all cases coming under my care showing this type of tachycardia are detained, as I believe that such a condition arising after any febrile disorder should not be regarded too lightly and returned to duty entailing the performance of arduous and sustained effort such as the conditions of active service demand. The vaso-motor mechanism must be given time to regain its normal tone, any attempt to hasten matters will only end in further prolongation of this disability.

France.

SPLINTS FOR USE IN ARM, ANKLE, AND LEG INJURIES,

WITH SOME OBSERVATIONS ON TREATMENT.

BY WILLIAM PEARSON, F.R.C.S. IREL.,
MAJOR, R.A.M.C. (TEMP.).

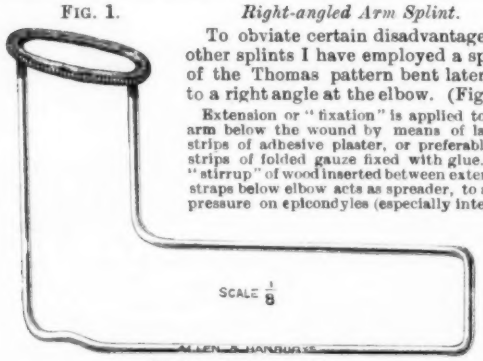
SOME apology may seem necessary for adding to the numerous splints introduced during the present war My reason is that after an experience of over 18 months with the splints here recommended the results obtained with them are better than those from other patterns.

FIG. 1.

Right-angled Arm Splint.

To obviate certain disadvantages in other splints I have employed a splint of the Thomas pattern bent laterally to a right angle at the elbow. (Fig. 1.)

Extension or "fixation" is applied to the arm below the wound by means of lateral strips of adhesive plaster, or preferably by strips of folded gauze fixed with glue.* A "stirrup" of wood inserted between extension straps below elbow acts as spreader, to avoid pressure on epicondyles (especially internal)



Right-angled arm splint.

of humerus. In some cases extension is more convenient by a single strip applied to posterior aspect of arm below wound.

The arm and forearm (and elbow, if necessary) are supported on suitably arranged slings of flannel bandage. A taut sling is fixed beneath the hand, and on it is placed a stout roller bandage which maintains hand and fingers in best position while allowing for their gentle movements. Where the case is complicated by musculo-spiral paralysis a larger support is used to maintain fingers as well as wrist in extension. A few steadying turns of a roller bandage are passed round forearm and splint above wrist. These are dispensed with when union has begun, so that very gentle elbow movements (both active and passive) are possible without disturbing the fracture.

The splint is slung at a convenient height clear of bed and patient's body, so that dressings, &c., may be carried out without disturbance. Usually four suspension cords are employed—two from lower end, one from angle below elbow, and one from ring at upper end of splint. The cords may be fixed to suspensory framework over bed or may work over pulleys with counterpoises, so that arm and patient may be raised or lowered at will. The external bar of the splint is carried only slightly higher on the arm than the internal, and is not carried in over top of shoulder, as in Jones's splint. Consequently the degree of abduction of arm may be regulated so as to give correct alignment between upper and lower humeral fragments.

The splint is applicable, like the straight Thomas's, to both right and left arms, but it must be stocked in two, or preferably in three, sizes as regards length of upper-arm segment. Although primarily intended for fractures of humeral shaft it may also be used for many other injuries in upper limb, for example, severe flesh wounds of arm and some elbow-joint and forearm injuries.

* A photographic illustration was supplied by the author and has been omitted.

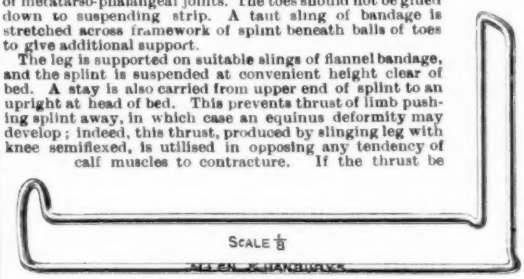
Ankle and Leg Splint.

For the original idea from which I devised this splint I am indebted to my colleague, Mr. J. F. Engledue Prideaux.

The splint, of light metal framework two feet long, is shown in Fig. 2. The foot is suspended by folded strip of gauze or length of flannel bandage applied to anterior half of sole with glue. Circular turns of a bandage (see Fig. 3) are really unnecessary to fix it to foot, but if used it is well to employ cardboard (cut to suitable size) in folds of gauze under sole to prevent lateral compression in region of metatarso-phalangeal joints. The toes should not be glued down to suspending strip. A taut sling of bandage is stretched across framework of splint beneath balls of toes to give additional support.

FIG. 2.

The leg is supported on suitable slings of flannel bandage, and the splint is suspended at convenient height clear of bed. A stay is also carried from upper end of splint to an upright at head of bed. This prevents thrust of limb pushing splint away, in which case an equinus deformity may develop; indeed, this thrust, produced by slinging leg with knee semiflexed, is utilised in opposing any tendency of calf muscles to contracture. If the thrust be excessive and inclined to produce a calcaneus deformity it may be regulated easily by altering degree of flexion at knee or controlled by fixing upper part of leg, as is described below for cases of fracture of leg bones.



Ankle and leg splint.

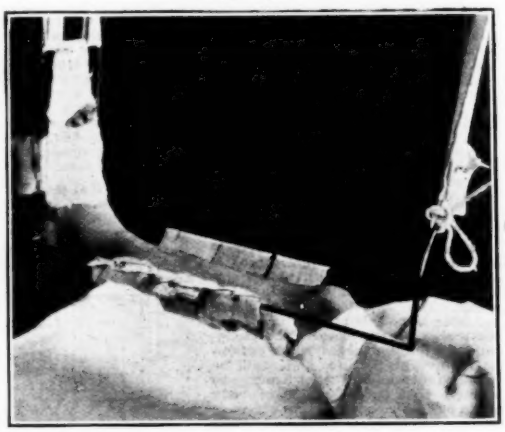
In leg fractures extension is made from ankle region to lateral bars of framework of foot-piece, and counter-extension by strips of gauze and glue applied to antero-lateral aspects of leg above wound and carried to upper end of splint, in which case the stay to head of bed is unnecessary. In practice it will be found that traction is unnecessary in many leg fractures due to gunshot injuries, as usually no tendency to overriding occurs as in ordinary oblique fractures of tibia; the "extension" and "counter-extension" straps should then merely act as "steadiers," as in fractures of humerus. In ankle injuries complicated by fractures of leg bones higher up I have employed the splint satisfactorily without any extension below.

The splint is suitable for use on any size of limb and is applicable to right and left legs alike. It may be used for wounds of the posterior tarsus and for any wound involving the calf muscles. It is much more convenient and comfortable than a Thomas or Wallace-Maybury splint in leg cases.

Both splints are readily adapted for use during transport of patient. To the arm-splint a strut or leg of malleable metal may be fixed beneath angle below elbow, the lower end of splint resting on patient's abdomen. The ankle-splint may be supported on legs fixed to upper and lower ends.

Since employing these splints I have been able to obtain better results, with much less difficulty for myself and to the greatly increased comfort of my patients. The material employed has been ¼-inch round iron, and the splint can be made readily by any smith at very little cost. The ring at the upper end of the arm-splint may be padded and covered with leather, or it may be left uncovered altogether until required for use, when it may be suitably padded with wool and jaconet in a few minutes. Both splints may be obtained from Messrs. Allen and Hanburys, Limited, to whom I am indebted for the illustrations of the splints shown in Figs. 1 and 2.

FIG. 3.



Ankle and leg splint in use in case of compound fracture of ankle-joint. Wound on outer aspect, in which tendon of peroneus longus is seen exposed. Also flesh wounds beneath each sling on posterior aspect of leg, and one in upper end of popliteal space.

LIQUID-TIGHT CLOSURE

AND THE TREATMENT OF WOUNDS.

BY WALTER HERBERT TAYLOR, M.D., C.M. TOR.,
AND
NORMAN BURKE TAYLOR, M.B. TOR., M.R.C.S. ENG., F.R.C.S. EDIN.,
CAPTAINS, CANADIAN ARMY MEDICAL CORPS.

IN THE LANCET of Sept. 22nd, 1917, we described under this heading a device to render a wound water-tight during irrigation, and so dependably water-tight that any desired degree of positive or negative pressure might be employed. The device has now been improved, its application simplified, and many complicating features eliminated. It is no longer necessary to shave the part. There are now no exhaust tubes to get out of order. A shield of poroplastic felt is not required, the device being held on merely by an ordinary roller or many-tailed bandage. We have on several occasions given the device to one of the nursing sisters to apply, and she has been able to provide a water-tight closure and to flood and aspirate the wound in about the time she would have required to do a dressing.

This is the desideratum which for nearly two years we have striven to attain, yet hardly any effort would have seemed disproportionate to the want which to us appeared a very obvious one. The need of some means of providing liquid-tight closure has, perhaps, always existed.

Description of the Improved Device.

Figs. 1 and 2 are diagrammatic. The relative thicknesses of rubber are approximately correct as shown.

FIG. 1.

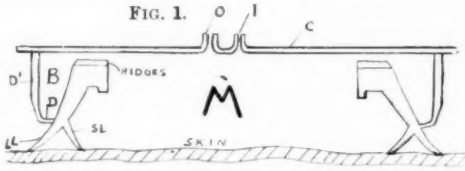
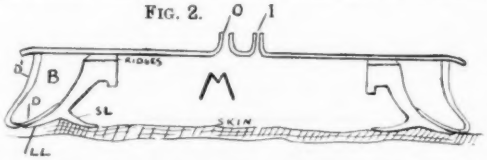


Fig. 2 shows the same more or less squeezed down by bandage pressure. In Fig. 2, when outflow O is closed and inflow I opened, water pressure commences to accumulate, resulting in an expanding

FIG. 2.



force between cover C (held down by bandage) and skin. This force also acts in an eccentric direction against the inner surface of large lip, LL, and upper surface of small lip, SL. It is obvious that a water-tight joint should result at juncture of small lip and skin. However, the water pressure acting upon inner surface of large lip, LL, might raise it like a curtain, allowing the pressure on small lip, SL, to buckle it out and underneath with consequent leakage. This difficulty has been overcome by applying the same pressure of fluid to outer as to inner aspects of large lip. We formed, external to the large lip, an annular chamber, B, bounded by thin bottom, D, thicker external wall, D^1, and corresponding portion of cover, C. This chamber communicates freely with main chamber M by means of radiate ridges on broad top of large lip LL, ensuring circulation. The cover C is attached to top of thick vertical wall D^1.

The fluid in chamber B will neutralise the pressure in main chamber M, thus obviating lifting of large lip when pressure is increased. Pressure upon thin bottom D bulges it against skin; pressure against thick wall D^1, and a corresponding portion of cover C, will be restrained by bandage.

Assuming that this device lies always on the skin, as the drawing indicates, leakage is evidently impossible. But so to devise it that its several parts will slide into position without buckling or kinking during its application, and afterwards to have them "stay put" during various alterations of pressure, muscular action, rolling in bed, &c., have been the chief difficulties, particularly since the changes in construction could not always be effected by the hand-working of rubber, but required a new steel mould to embody each improvement. Altogether we have tried and discarded over 30 different appliances.

The increased efficiency of present form of device is due chiefly to the small lip being attached to a point below middle of large lip, so that during the eccentric spreading of the latter produced by bandage pressure the small lip is carried outward, too, and consequently placed upon the stretch. Its adaptability to different curved surfaces of body has been thereby enhanced. Its mechanical integrity was shown by subjecting it to a pressure of 20 feet when applied to an unwounded forearm. Such a pressure, of course, is not relevant to treatment of wounds.

Method of Use.

The technique of the application and use of the device is as follows:—

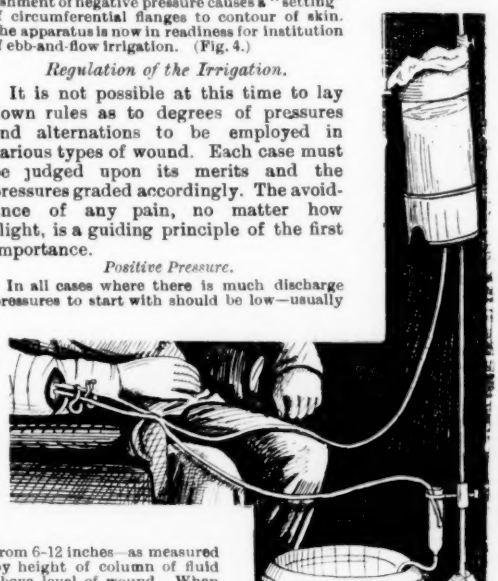
No drainage-tubes are used in wound; these tend to block side pockets and to prevent thorough cleansing of granulating surfaces with which they come into contact. Furthermore, drainage-tubes as a means of conducting fluid into depths of wound are superfluous, as fluid pressure beneath cover of device is continuous with that in wound. In some cases, however, with small wound outlets, as seen in chronic sinuses, a freer entrance to fluid and exit for pus may be provided by spreading lips of wound. For this purpose a small wire "cage" is used resembling a couple of hairpins with their loops joined at right angles. (Fig. 3.) The looped extremity of cage is passed into wound and its limbs spread out to produce gaping. The projecting free ends are bent over parallel to the skin.

FIG. 3.

The device is now applied with its centre coinciding roughly with centre of wound and bandaged to part. The bandage, preferably of calico, is extended for at least an inch beyond upper and lower margins of device, its pressure being snug and sufficient to produce collapse of vertical walls of appliance without constricting the part or causing discomfort. In cases where there is difficulty in moving the part a many-tailed bandage is most convenient. It is advisable, where possible, to place inner lip of apparatus out of contact with depressed scars or sharp elevations of skin. Where these cannot be avoided a little vaseline or a thick bismuth paste will overcome the difficulty.

A glass reservoir capable of holding 3 to 6 pints adjustable to any level and provided with a length of ¼ inch tubing and clip should be ready to hand. The reservoir tube is now connected to smaller of two tubes issuing from the device. The larger or outflow tube arising from same is joined to a short length of tubing, which is pinched off and led into a waste-pail. The reservoir, filled with 5 per cent. saline at 115° F., is placed at required level. The inflow tube is then opened and space beneath cover allowed to fill with fluid. When level of fluid in reservoir has ceased to fall inflow should be closed and outflow opened. The ensuing establishment of negative pressure causes a "setting" of circumferential flanges to contour of skin. The apparatus is now in readiness for institution of ebb-and-flow irrigation. (Fig. 4.)

FIG. 4.



Regulation of the Irrigation.

It is not possible at this time to lay down rules as to degrees of pressures and alternations to be employed in various types of wound. Each case must be judged upon its merits and the pressures graded accordingly. The avoidance of any pain, no matter how slight, is a guiding principle of the first importance.

Positive Pressure.

In all cases where there is much discharge pressures to start with should be low—usually from 6–12 inches—as measured by height of column of fluid above level of wound. When no free pus issues from mouth of wound upon removal of device and little or none can be expressed by "milking" along its tracks pressure may be increased. It is doubtful whether it is ever necessary to go beyond 18 inches elevation above part, though the employment of positive pressure above this, even up to 3 feet, has in no way been associated with untoward effects.

Negative Pressure.

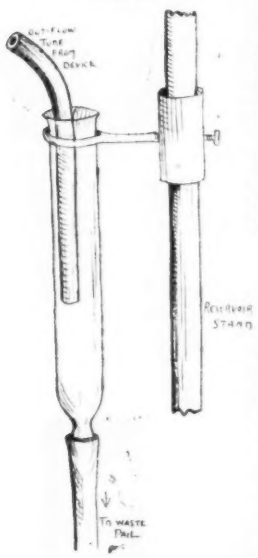
More care must be exercised in use of negative pressure. In old chronic sinuses, even though discharging profusely, the maximum amount of negative pressure which height of ordinary military bed permits—about 2½ feet—may be used with impunity. In acute cases it must be greatly reduced, and our one reliable criterion is the causation of pain, freedom from which should be absolute. Large "doses" of negative pressure produce a profound reaction in wound, and while this is salutary in chronic cases it possibly may be otherwise in an acutely inflamed wound.

In our earlier cases, mostly of chronic type, we underestimated the potency of negative pressure, and were much puzzled by the occurrence sometimes of slight initial rise of temperature (½°–1°) after device had been in operation for a few hours. As this rise ran parallel to marked cleansing and freshening of wound, and notable improvement of all

local signs, it struck us in the light of a phenomenon, until the same pressure was employed in an acute case, when the stimulating effects of negative pressure became rather too evident. In this case patient had complained of pain; nevertheless, in a few hours the wound opening, previously pouring pus, was found filled with lymph and blood; there was improvement in general appearance, less swelling and tenderness, and yet temperature was elevated. We then came to look upon this rise of temperature as being of a reactionary nature and consequent upon pouring out of lymph and extravasation of blood, with their content of ferments, into cavity of wound. We have been led, therefore, to consider it of kindred nature to the aseptic fever following operations and accidents.

In very acute cases minus pressure may be greatly reduced or even abolished until the more urgent symptoms subside. To measure its amount with accuracy we use the barrel of an ordinary 3 oz. glass syringe, attached to reservoir stand by sliding collar, and so adjustable to any level. (Fig. 5.) The outflow tube arising from the device is made to empty into glass barrel, whilst length of tubing attached to syringe nozzle leads into waste-pail. The depth of pendant column of fluid upon which negative pressure depends is in this way varied as desired.

FIG. 5.



In cases with much swelling it may be necessary as this disappears to readjust bandage. Sometimes subsidence of swelling is remarkably rapid, in which event the bandage may become loose and device thereby allowed to rise from skin.

Alternations of Pressure.

The variations between positive and negative pressures are accommodated, as regards duration, to particular features of the case.

At commencement, and until effluent becomes fairly clear, the alternations should be of about 15 minutes each, or 15 minutes positive and 5 to 10 minutes negative. After this, positive pressure is prolonged to half-an-hour or so and duration of negative adapted to type of wound, being long in chronic and short in acute cases. As a general rule the duration of negative pressure should not exceed 20 minutes and never be long enough to produce pain. These alternations may be regulated by patient during waking hours and, for convenience, the periods of positive pressure may be prolonged during night and duration of negative be just sufficient to freshen solution in wound (about 10 seconds).

A wound with counter-opening should be treated by application of two devices. The device covering main wound should have its *outflow* tube occluded by short length of glass rod for course of case. The device covering counter-opening should have its *inflow* occluded in same way. Thus through-and-through circulation of fluid is provided for. It will be convenient to have devices for application to counter-openings made much smaller and furnished with outflow tube only. This application of the method is particularly useful in the drainage of joints.

In employment of device in empyema, positive pressure should be very low and its periods be of short duration. The negative pressure exerted in intervals should equal that of normal pleural cavity—i.e., about a 3-inch column of water. To what extent this may be increased to encourage lung expansion we do not know, but as much as 12 inches has been used without ill-effects. The device should be bandaged to chest during expiration.

After irrigation with hypertonic saline has been in operation 4 to 10 days—according to severity of infection—we are in the habit of removing device for two or three hours. If no pus appears, clear lymph and blood alone occupying mouth of wound, the device is reapplied and irrigation continued with an antiseptic solution for 48 hours, our idea being to effect a final sterilisation. Latterly we have been using a 1 in 5000 solution of flavine in hypertonic saline.

Results.

Certain phenomena have been observed to follow so constantly the employment of this method of irrigation that we are able now to predict their appearance. Though our investigations as yet have been largely confined to stubborn old sinuses, and not to recent wounds, this form of irrigation has on many occasions been instituted at the time of an acute flare-up. We have not, it is true, an imposing array of cases as regards number, but our results have been of a very positive nature. We do not propose to weary our readers with individual instances, but shall wait until our series is compiled for presentation in tabulated form. The results which we have observed may be epitomised as follows:—

1. Rapid softening of indurated tissues and return to normal colour.
2. Disappearance, often within 24 hours, of swelling.
3. Profuse discharge of pus for first 12 hours, and rapid diminution afterwards, the secretion becoming sero-purulent, then lymphoid in character.
4. On an average, in chronic cases, the wound is cleansed of pus in 36 hours—i.e., pus is removed as soon as formed.
5. Granulations become bright in colour and bleed more readily. After four or five days if device be removed an old chronic sinus usually fills up with lymph and blood
6. The almost instant relief from boring pain which may have worried patient for months.
7. The improvement in general health and morale of patient incident to these local changes is often remarkable.

[A long section[1] on rationale has been omitted owing to lack of space. The use of the device in dressing-stations and ambulance-trains was then advocated, the question being considered chiefly from the view-points of time and expense. The method was here regarded merely as a portable wound-bath which becomes part and parcel of the patient during transportation, and to this end a convenience, but in a place and at a time when such a convenience means much. Both tubes leading from the main chamber might then be tied off and the patient evacuated, the fluid to be drained away and replaced by fresh at the next stop without so much as undoing the bandage. The authors believe that the difference in time required would be slight. "If at the main dressing station supplying some one casualty clearing station in France this method should be tried in that one grave type of wound to which it seems particularly applicable—we refer to compound fracture of the femur—we believe the results would furnish a surprise."]

Summary.

The following advantages, it is believed, are associated with this plan of treatment:—

1. Penetration of fluid to, and tidal evacuation of, distant loculi, resulting in thorough mechanical cleansing of wound cavity.
2. Establishment during negative pressure of outward flow of lymph with, presumably, its quota of bacteria.
3. Avoidance of large mutilating incisions required for evacuation of deep pockets and insertion of fluid-conducting tubes.
4. The concentration of antiseptic or hypertonic fluid remains constant, since, the freedom of its delivery into the wound being unrestricted, the solution can be frequently renewed.
5. The ease with which the beneficial effects of heat in interior of wound may be secured.
6. Elimination to a large extent of personal equation.
7. Ensurance of dry beds and sense of comfort to patient, who is enabled in many instances to be out of bed whilst undergoing treatment.
8. Economy in time, effort, and material.
9. Presumed adaptability of its use to dressing stations and ambulance trains.

This, then, is the substance of our brief for the mechanical cleansing of wounds. Whether the method be looked at from the therapeutic view-point, irrespective of its palpable convenience, or whether it be regarded as a convenience only, yet one which would render the bath treatment of wounds possible near the firing-line and during transportation, the implication surely is that this measure should be tried.

ON BLADDER DRAINAGE AND IRRIGATION.

BY JAMES MACMUNN, M.R.C.S., M.R.C.P.I.

MANY cases of cystitis thought incurable are amenable to constant antiseptic and astringent irrigation and efficient drainage. Cases of prostatectomy are lost on account of the "two-stage" procedure not being adopted, and also through defective after-drainage. When doubt exists about doing prostatectomy, preliminary drainage will likely decide. If the patient survive the minor operation he will likely survive the major; whereas he might have succumbed to the combined operation. Even drainage of itself is at first a load to weak kidneys, as shown by blood, urea, and urine tests. But readjustment, as a rule, soon sets in.

Description of Instruments.

The means taken to prevent urine leaking from bladder wound into cellular tissue I consider most defective, a view emphasised by the loss of one valuable life.

Fig. I. is a trocar, which in use is kept in place by the index finger pressing on A whilst the hand holds the semi-cannula. When the bladder is punctured the trocar is removed, and the notch B catches in edge of wound and holds bladder up, whilst a rubber tube C (Fig. II.), stretched on mandrel D, is introduced. The end of rubber tube is cut V-shape on each side; apices of V are transfixed and tied at E. The mandrel impinges against suture; tube is stretched to about half normal size and then fixed by clamp F. This clamp is unscrewed after insertion of tube and semi-cannula into bladder, and after removal of

[1] This section appears at length in the April number of the official *Bulletin of the Canadian Army Medical Corps.*

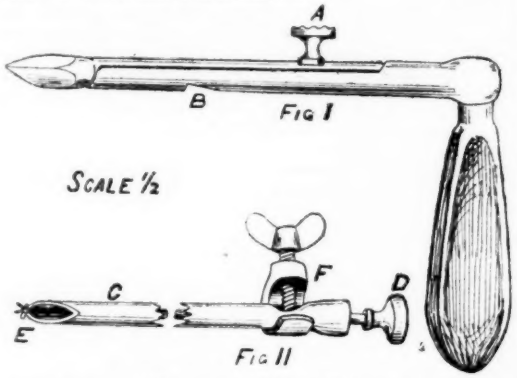
trocar and cannula, the tube resumes its normal size, tightly corking the opening in bladder.

The other instrument (Fig. III.) is used after suprapubic prostatectomy.

It is a large metal tube—made for me by the Holborn Instrument Company—with arms for ingress of flushing fluids and egress of urine. A is a rubber cork, B a removable slide dividing main stem into two channels when required. The wall of bladder wound is bound into a groove by suture. Perfect dryness, perfect drainage, and, when required, perfect irrigation are secured.

In either instrument, a siphon or pump is attached to one arm (a T piece being inserted into rubber tube of the first) and a valveless Higginson's syringe placed in circuit, so that in any blockage or inactivity pressure on bulb rights it.

I usually make the wound in the bladder correspond to size of tube—best done with a broad knife whose width is less than half the circumference of the tube. U shaped pieces cut from the ends of drainage-tubes prevent tubes sticking to bladder, should they—which they should not do—come in contact with bladder floor.



An extemporary rubber apparatus like the T-shaped one, or one to act like it, may be made in a few minutes. A large rubber tube is transversely grooved by a red-hot round piece of iron—such as a knife-sharpener. A hole is bored by top of iron ¾ inch from tube top, and another a little below on opposite side. Through one hole a smaller tube is tightly inserted and stitched into main tube. Into the other perforation a thick rubber catheter is passed as far as end of main tube; the top of latter is corked. The catheter is fitted to the irrigating supply, the other arm is the egress tube. Everything is watertight.

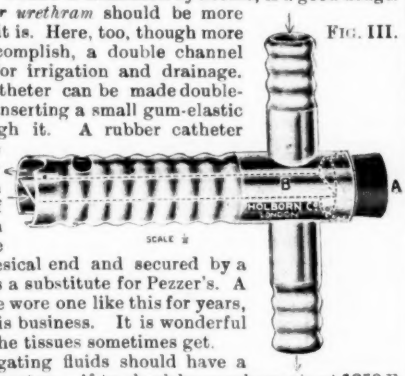
Perineal drainage is best done by the same means; here, however, the holes are bored more obliquely. Such a means of drainage should have other uses, abdominal drainage, &c.

Other Points.

I usually suture the parietal tissues with silver wire softened in a flame. Silver is inimical to micro-organisms, and allows of closure of wounds without the circular constriction of other sutures. A large hypodermic needle, through which the wire is passed after wound is transfixed by needle, is a good dodge.

Drainage per urethram should be more effective than it is. Here, too, though more difficult to accomplish, a double channel may be used for irrigation and drainage. Any rubber catheter can be made double-channelled by inserting a small gum-elastic catheter through it. A rubber catheter can be made self-retaining by passing a short piece of rubber through two oblique holes at its vesical end and secured by a stitch. This is a substitute for Pezzer's. A patient of mine wore one like this for years, going about his business. It is wonderful how tolerant the tissues sometimes get.

FIG. III.



Bladder-irrigating fluids should have a constant temperature—if to check hæmorrhage about 125° F.

Renal suppression is greatly prevented by well-arranged hot irrigation. So are ordinary shock, blood-clotting, and sepsis.

It is futile to try to keep up a steady temperature in the ordinary way. A good way is:—

Two holes are bored in, say, a tin kettle; a metal tube is pushed through and soldered in. One end of tube is connected with rubber supply tube, the other with tube attached to the bladder. A thermometer, spirit lamp or gas-jet do the rest; or more simply still, the supply-tube is coiled in the heated water.

Men accustomed to large "residual" often, as is known, die when this residual is too suddenly removed. It is not so well borne in mind that for a few days after prostatectomy intravesical tension is also a thing to consider.

Finsbury Pavement, E.C.

FISTULA IN ANO.

WHY IS OPERATIVE INTERFERENCE SO OFTEN INEFFECTUAL?

BY F. SWINFORD EDWARDS, F.R.C.S.,

PRESIDENT OF THE SUBSECTION OF PROCTOLOGY, ROYAL SOCIETY OF MEDICINE; CONSULTING, NOW ACTING, SURGEON TO ST. MARK'S HOSPITAL FOR FISTULA, ETC.

PERHAPS I may surprise a good many of my professional brethren by suggesting that operation often fails to cure excepting in the simpler forms of fistula. The experience gained after many years of work at St. Mark's Hospital and in private practice leads me to affirm that such, unfortunately, is indeed the case. Some three years ago I saw three patients within ten days in consultation. The first had suffered from fistula for 20 years and had undergone many operations, the last being eight weeks previously. The second had an unhealed wound, with discharge of pus after the sixth operation, and the third was in the same condition after the second operation carried out two months before. They had all been under hospital surgeons of repute and were all suffering from some variety of what is known as "horseshoe" fistula. I operated myself on the first two with complete success, and in the third case a like result followed after I had pointed out to the surgeon the nature of the lesion and the necessary incisions for a cure.

In hospital practice hardly a week passes that I am not called upon to operate on a case which has undergone operation in another hospital, and this not only in vain but with a cicatrix showing that the sphincter had been divided, rendering any further division liable to result in some amount of incontinence.

Causes of Failure: Varieties of Fistula.

In my opinion the causes of these failures are due to one of three reasons. First and foremost, the topography of the fistula is not thoroughly recognised, and thus a part of the fistula's track escapes division. Secondly, caries of the coccyx, or even of the ischium, is a not infrequent cause of a persisting fistula, and unless this is discovered and dealt with a cure is impossible. Thirdly, tubercle; but although a certain small proportion of fistulæ are tuberculous, it is astonishing how readily healing takes places after operation in the majority. When it does not the operation wound remains open and gaping, but the fistula as such may no longer exist.

I propose to limit my remarks in this communication to the first cause of failure.

Let me take a case of complete fistula—i.e., one having both an external and an internal orifice. An external orifice bears a definite relation to the internal, as was pointed out many years ago by my late colleague, Mr. D. H. Goodsall. He affirmed that if a line is drawn transversely across the centre of the anus, external openings anterior to this plane will usually have their openings in the gut immediately opposite, and such fistulæ are therefore straight and simple; but, on the other hand, where the external opening is behind this transverse plane, the internal opening will usually be found in the mid-line dorsally and between the two sphincters. Hence the fistula runs backwards and not towards the gut at first, but to a point behind the gut, whence it runs straight in from behind forwards. In this way the fistula is more or less curved, sometimes even being bent to an acute angle, depending on the situation of the external orifice. In most cases of fistula, especially when of long standing, there is some amount of induration about the track, which can readily be felt by compressing the part between a finger in the bowel and the thumb outside. In this way the direction of the track can often be ascertained and the diagnosis of a straight or curved fistula verified. I have called this variety the "semi-horseshoe," and it is more frequently met with than the "horseshoe," which is merely a "semi-horseshoe" on both sides.

It is said that there is no rule without an exception, and such is the case here, for one sometimes meets with an external opening in the mid-line posterior to the anus and not far from it, the track of the fistula running straight into the anus but below the sphincter—i.e., superficial to it. It is a subcutaneous track and will be found due to a posterior fissure, and both lesions can be treated by a simple division. Again, as touching those external openings which are situate anterior to the above-mentioned transverse plane, although it is true that they are generally simple and straight

fistulæ they are sometimes branched or may be multiple. An anterior "horseshoe" fistula is practically unknown.

Both these varieties of "horseshoe" fistula arise in the same way. An abscess forms in the mid-line dorsally between the bowel and coccyx, but nearer the gut. It lies above the fibres of the sphincter coming from the coccyx and the ano-coccygeal ligament, which cushion of tissue prevents the pus coming to the surface and breaking in the mid-line but directs it to one or both sides: if to one side only a "semi-horseshoe" fistula results, if to both sides a complete "horseshoe."

A "horseshoe" fistula may have many external openings, I have seen as many as six or seven, and may even have more than one internal; if so, they are situated in the mid-line dorsally, one above the other, possibly being separated by as much as two or three inches. I might here mention, in speaking of these internal openings, that whilst the lower one situated just above the external sphincter can be felt as a depression, the upper one, when present, usually projects into the gut, nipple-like to the touch and is really a small granuloma. I have not seen this fact mentioned elsewhere, but its recognition should help the surgeon to avoid missing the upper opening when operating.

The whole success in operating on these cases lies in the dorsal division of the sphincter and the laying open of all branch sinuses into this dorsal incision, together with a search for a sinus running up the bowel at right-angles to this main track and joining it just outside the gut, where the lateral sinuses meet. It may run up the bowel between the muscular and mucous coats or outside the muscular, and may be a cul-de-sac, or open into the gut above the lower internal opening.

A considerable number of fistulæ are quite superficial and after being laid open it will be found that the external sphincter has not been touched, or at most only a few fibres. To put the part at rest and thus assure an easy daily dressing and a speedy healing, either Salmon's back cut should be employed or a thorough forcible dilatation be carried out or a combination of the two—a course I generally employ, as it is astonishing how soon the sphincter recovers its power even after what appears to be a most thorough forcible dilatation.

Points in Operating on a "Horseshoe" Fistula.

In extensive cases it is well to divide the operation into two parts.

At the first operation lay open freely all the sinuses, running into the main posterior track, and when these are nearly healed, say in a month's time, the dorsal track into the bowel can be incised. This method, "à deux temps," has these advantages:—1. The wound has been extra-rectal and, therefore, almost free from all fæcal contamination. 2. It lessens the gravity of the operation. 3. There is a chance, remote though it may be, that the fistula will heal without any division of the sphincter.

In cases where there is a sinus running up the bowel, the whole operation should be done at one sitting as it gives this track a better chance of becoming obliterated, especially if it is outside the muscular coat of the rectum, and has, therefore, not been laid open, but merely dilated and curetted. When the sinus is between the mucous and muscular coats it should be laid open. If by any chance a sinus has been missed and the surgeon has laid open the fatty tissue of the part without seeing the granulation-lined track at the bottom of the wound, this should be closed with buried catgut sutures.

I am not a believer in the treatment of fistula by excision and suture, for although it may often succeed, it does not always, owing to the difficulty of keeping the part aseptic, and the last state of that patient will be worse than the first.

The successful issue of a case must necessarily depend a good deal on its after-treatment. Patients who have already undergone an operation for fistula tell me how much they dread the daily dressing, and in cases where a further operation is necessary it is chiefly this dread which prevents them submitting to it. Nor can one wonder at this when watching the methods of some surgeons, who force up along the wound a strip of lint or gauze without having first applied a lubricant and unaided by the index finger in the bowel. After the first dressing or two the daily toilette of the part should be painless to the patient. The method I recommend is as follows:—

The finger, well coated with vaseline, should first be passed into the rectum, avoiding the wound, whilst the patient is urged to strain out as though at stool. A dressing of sterilised cotton-wool or gauze wrung out in warm boric or biniodide lotion is now carried up by a probe-pointed director along the finger which makes pressure away from the wound acting as a retractor, thus giving room for the gentle packing of the wound without the use of any force. The dressing should not be bulky, but only sufficient to ensure the wound healing from the bottom. One often hears the term "plug" used when referring to this dressing, and I confess I have a great aversion to this term, for it is a well-known fact that plugging a wound retards its healing. I have more than once seen a wound which has refused to heal in spite of diligent plugging, but which on the substitution of a light dressing has healed rapidly.

In cases where the division of a high-lying track would involve the internal sphincter it is, as already mentioned, best not to lay this open into the bowel, but to content oneself with enlarging it by an incision away from the rectum sufficient to give passage to the finger. The whole track should be curetted and packed with a long strip of gauze. From time to time during convalescence this sinus should be syringed out with a strong solution of argent. nit., gr. xx. to the ounce, by means of a sinus syringe, or in lieu thereof a probe coated with this salt may be employed. In this way a cure generally ensues.

Another point which is helpful to a speedy convalescence is the avoidance of a prolonged confinement in bed. Most of my patients begin to walk about by the tenth day, and even in extensive cases of "horseshoe" fistula three weeks of bed is usually enough. Sitting, however, is another matter; thus, at first, I recommend walking exercise rather than taking the air in a motor or carriage.

HORSESHOE FISTULA.

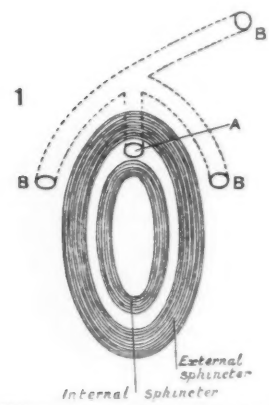


Diagram of a typical horseshoe fistula with one branch. A, Opening into bowel through its posterior wall. B, B, B, External openings in the skin. The dotted lines indicate the track of the fistula.

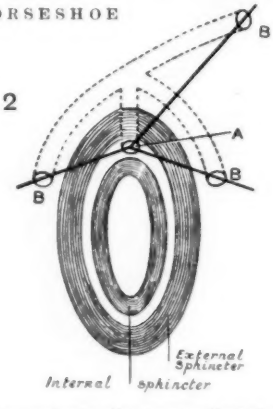


Diagram showing the wrong method of operating in horseshoe fistula. A great deal of the fistulous track has escaped division and the external sphincter has been divided obliquely in three places. The thick lines in Figs. 2 and 3 represent the incisions in the operations.

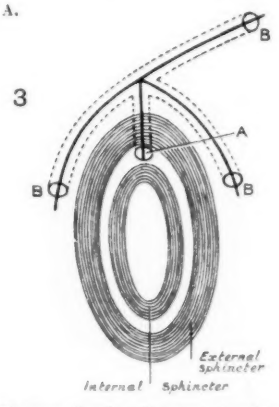


Diagram showing the correct method of operating in horseshoe fistula. The whole of the fistulous track has been laid open and the external sphincter has only been divided once, and then at right angles to the direction of its fibres.

(From blocks illustrating Mr. Swinford Edwards's article on Operations upon the Rectum and Anus in Burghard's System of Operative Surgery. Kindly lent by the Oxford Medical Publications.)

Medical Societies.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

ANNUAL CONGRESS.

THE Annual Congress of the society was held on May 2nd to 4th, under the presidency of Mr. E. TREACHER COLLINS, at the rooms of the Royal Society of Medicine.

Opening of Congress: Presidential Address.

The PRESIDENT, in opening the Congress, reminded the members that though the society now only held an annual congress it was not dormant during the remaining 362 days in the year, as there were constantly arising matters of ophthalmological interest calling for its vigilance and care. At the last Congress a strong committee was appointed to consider and report to the society on the standards of vision which were desirable for the performance of different duties in the British Army. This report had already appeared in the *British Journal of Ophthalmology*, but since then the medical examination of recruits had been transferred from the War Office to the Ministry of National Service, which had drawn up fresh standards of vision for recruits. The War Office had recently created the new post of Consulting Ophthalmic Surgeon to the Forces at Home, and the President congratulated Colonel J. Herbert Parsons, F.R.C.S., on having been appointed to fill this important and most responsible post. As the hope that this Congress might have been held in a time of peace could not be realised, the society's chief aim must still be to render whatever aid it could to the fighting forces, and to consider how best to relieve the sufferings which the war involved. Numbers of men had been transferred from countries where contagious ophthalmia was perennially rife to others in which it had been of only sporadic occurrence. Many men free from suspicion of contagious eye disease had been sent into districts where, it was estimated, quite 90 per cent. of the population had, or had had at some time, trachoma. These, in course of time, would return and mix again with their own uninfected kith and kin. He reminded the meeting of what happened when the troops returned from Egypt after the Napoleonic wars, and asked whether anything like that was to be allowed to occur again. Could any collective action be taken by that society to bring to bear the newest knowledge in preventing a serious spread of the disease after the war? The President then referred to the greater cohesion now existing among those practising the specialty in the Kingdom, by the affiliation of the Oxford Ophthalmological Congress, and the Midland Ophthalmological Society, as well as by the amalgamation of the various special journals with the *British Journal of Ophthalmology*. Visual tests for the performance of different duties in the public services, and the granting of licences entitling persons to carry on occupations in which defect of sight might prove injurious, were still far from satisfying; and the blindness following ophthalmia neonatorum was still far too frequent in this country. Further care was also required in safeguarding children's eyesight during the strain of school life; especially there should be established curricula for short-sighted children. He also urged that more attention should be devoted to the damage to eyesight due to occupations in which illumination was defective. With regard to the profession itself, he said that the perfunctory attendance by a student for three months in the ophthalmological out-patient department of a general hospital, without necessarily any subsequent test by examination of the amount of knowledge he might have acquired, could no longer be deemed an adequate training in eye diseases for a medical practitioner. He hoped other parts of the Kingdom would follow in this matter the example of Ireland, where the passing of an examination in ophthalmology was required before a man was allowed to practise that specialty; and a great service would result from following more widely the example of Oxford in establishing higher examinations in ophthalmology. Being possessed of such a diploma would give its holder justification for styling himself an ophthalmologist—a title at present too often assumed for the most inadequate reasons. Mr. Collins concluded by announcing that Dr. Morax, of Paris, had accepted the Council's invitation to deliver the Bowman lecture in 1919; and that the Edward Nettleship Prize, a gold medal for the encouragement of scientific ophthalmic work, was awarded to Lieutenant-Colonel Gordon Holmes, C.M.G., for the valuable work he had done during the past three years on disturbances of vision in association with cerebral lesions.

Effects of Hypotony in Rabbits' Eyes.

The PRESIDENT then read a paper on an Experimental Investigation as to Some of the Effects of Hypotony in Rabbits' Eyes.—The paper was discussed by Lieutenant-Colonel R. H. ELLIOT, Sir GEORGE BERRY, Mr. GEORGE YOUNG, Captain T. HENDERSON, Mr. M. S. MAYOU, and Dr. GEORGE MACKAY.—The PRESIDENT replied.

Histology of the Trephined Disc in Glaucoma Operations.

Colonel ELLIOT read a communication entitled "A Contribution to the Histology of the Trephined Disc in Glaucoma Operations." To obtain the most satisfactory results from the examination the discs should be cut strictly in the meridianal plane of the eye; otherwise most erroneous conclusions were liable to be drawn as to the parts removed. The specimens shown indicated that it was possible to remove the posterior lining of the sclero-corneal disc throughout its whole thickness and inclusive of Descemet's membrane and the pectinate ligament. Yet some sections showed a lack of posterior lining, others might show the membrane of Descemet separated by a short distance from the disc, while still others might show it in normal apposition. A large number of sections must be examined before deciding whether the deepest layers had been removed, and what proportion was Descemet's membrane, and how much was pectinate ligament. For a trephining operation to be successful it seemed to be essential that a portion of Descemet's membrane, or of the pectinate ligament, or of both, should be completely removed. In every glaucomatous case which had been examined hyaline thickenings had been found on Descemet's membrane close to where it was about to break up to form the pectinate ligament, always lying on the posterior surface, so that they were obviously products of the activity of the endothelial layer of Descemet's membrane. Possibly they were the result of the chronic congestion attending long-continued high pressure in the eye.

The paper was discussed by Captain HENDERSON, the PRESIDENT, Captain R. R. CRUISE, and Mr. STROUD HOSFORD.

The Use of the Visor for the Army.

Captain CRUISE submitted a further note on the Use of the Visor for the Army and demonstrated a greatly improved design on that submitted last year, when the society passed a resolution recommending the universal use of the visor by the troops. The present design was the result of an extensive tour among the officers and men and of a desire to meet the objections to the former kind, urged as the result of actual war conditions. It was regarded not only as overcoming all the objections, but as being really fool-proof. A central strut kept the chain mail away from contact with even the most prominent noses and acted as a fixed point on which the springs could pull, keeping the visor taut and motionless before the eyes. At no period was there any strain on the comparatively weak meshes of the chain mail. The strut could pivot freely round the margin of the brim, lying flat on its upper surface when the visor was not in use. The raising or lowering of the visor required only one second. There were no chains to rattle (one of the objections to the previous form was that the rattling prevented silent patrol work) nor hooks to break off. Precision of shooting was not reduced when wearing the visor. All his subsequent inquiries confirmed the statement he formerly made as to the proportion of blindness which was preventable by such a visor.—Colonel LISTER said he regarded the design as a beautiful one, but there seemed to be an extraordinary apathy on the part of the authorities to adopt it regularly. From the men's point of view the great difficulty was the wearing of this visor over a gas helmet, especially in hot weather.

The Dioptric Mean in the Myopic Soldier.

Captain W. WALLACE read a paper on the Dioptric Mean in the Myopic Soldier. Several members gave their own experiences in connexion with a series of cases.

Captain HENDERSON contributed a description of a suture operation for contracted sockets and allied conditions.

Suggested Clinical Tests of the Threshold of Light and Colour.

Mr. GEORGE YOUNG read a paper entitled "Suggested Clinical Tests of the Threshold of Light and Colour." The basis of his colour scheme was standard inks, and degrees of intensity were produced by definite dilutions, up to 1 in 1024. These were put in a small and convenient album, the leaves of which were turned rapidly in the view of the patient. The relationship of colour perception to certain diseases was very definite; in glaucoma the light sense was much affected, and in the retinitis of pregnancy colour-perception for yellow was very much reduced. The form sense did not, in his opinion, exist apart from the light sense. The amount of illumination used in the test made no difference to the result.—Dr. W. W. SINCLAIR spoke highly of the method, which he had found valuable for diagnosis as well as prognosis. For the detection of central scotomata the album was the best thing he had come across.

Plastic Operations of the Eyelids.

Thursday afternoon was devoted to a discussion on Plastic Operations of the Eyelids. The discussion itself was preceded by an exhibition of patients by Major H. D. Gillies and others, mostly from the special hospital at Sidcup, and the great improvements brought about in these cases was illustrated by a wealth of photographs, which were shown by means of the epidiascope, chiefly by Major Gillies.—Others who contributed to the discussion were Mr. C. HIGGENS, Captain DERWENT WOOD, Mr. T. HARRISON BUTLER, Major A. W. ORMOND, Mr. MAYOU, Captain CRUISE, Colonel NEWLANDS (Australian Medical Corps), Major WALDREN, and Dr. J. GRAY CLEGG.—A resolution of thanks to Major Gillies was carried by acclamation.

Conditions Affecting Standards of Vision in the British Army.

Mr. MACMULLEN read the report of the committee on the Conditions Affecting the Standard of Vision in the British Army, and the honorary secretary (Mr. Mayou) read a communication on the same subject from Mr. H. M. TRAQUAIR and Mr. PATERSON. The committee's report showed that the War Office was not at present willing to afford facilities to the society to investigate certain questions dealing with the eyesight of troops, including that as to whether defective colour vision was likely to cause trouble in some occupations in modern warfare. There was considerable discussion on the matter.

Contagious Diseases of the Conjunctiva.

On Friday morning members travelled to the Metropolitan Asylums Board Ophthalmia School, Swanley, which they inspected under the direction of the President, Mr. F. A. C. Tyrrell (medical officer), and the matron, Miss Lynch. Here a discussion took place on Contagious Diseases of the Conjunctiva.

A communication on the subject by Major J. F. CUNNINGHAM and Captain J. WHARTON was read by Colonel Lister. This stated that the problem of contagious diseases of the conjunctiva arose in France through the introduction of coloured labour units there. 19 per cent. of the Egyptians had active trachoma, and 9 per cent. of the Chinese. The infected cases had to be weeded out from the clean cases. The authors had no knowledge of any instance in which the disease had spread from these troops to the civilian population or to our own troops. Under treatment the cases were improving and the number of sickness hours through it were no more than in the average clean company. It was ordered that no cases of definite trachomatous granulations or acute conjunctivitis should be allowed to embark from Egypt or China to France. The cases were divided into infectious and non-infectious. The latter were subdivided into those who had had the disease but in whom it was now quiescent, and those who were now quite free. Of the Egyptians 16 per cent. had active trachoma, 29 per cent. were quiescent but showed signs of old trachoma. 2 per cent. of the trachoma cases in Egyptians were acute. Among the Chinese, 4·7 per cent. had active trachoma, 2·3 per cent. were quiescent but had signs of old trachoma. 0·9 per cent. of the Chinese cases were acute. No cure was guaranteed, the object being to keep the men fit to work and to prevent the spread of the disease. The stringent precautions to prevent spread were outlined. Treatment was carried out regularly, and at hours which did not interfere with the men's work. Some of the men developed simple conjunctivitis. The treatment employed was the application of a couple of drops once a day of acid. bor. gr. x., zn. sulph. gr. ii., aq. ad 1 oz. It was done on the return of the men from work, preferably by the native medical orderly, the men squatting in rows, pulling down their lower lids and looking upwards while the orderly administered the drops. In this way a company was treated in about 20 minutes. Less than one man per month had had to be repatriated because of the disease. The figures showed a steady improvement, but no transfers from an infected to a clean company were permitted. A high tribute of praise was accorded to the ophthalmic surgeons engaged in the work.—The ensuing discussion was participated in by Colonel LISTER, the PRESIDENT, Mr. TYRRELL, Mr. MAYOU, Mr. J. B. STORY, Colonel ELLIOT, Major DERBY (U.S. Army), and Mr. D. V. GIRI, and a resolution on the subject was passed.

On Friday afternoon Colonel W. T. LISTER demonstrated specimens at the Royal College of Surgeons of England, and in the evening a clinical meeting was held at the Royal Society of Medicine, and on Saturday morning a number of cases were shown and discussed at the National Hospital for Paralysis, Queen-square. During the Congress a museum was open under the direction of Mr. A. C. Hudson.

JOURNALS.

THE *American Review of Tuberculosis* (Baltimore: National Association for the Study and Prevention of Tuberculosis. Price 35 cents) for February contains a paper by Dr. G. B. Webb, Dr. C. T. Ryder, and Dr. G. B. Gilbert, on attempts to produce immunity by transplanting tuberculous lymph nodes into healthy animals. This paper is a preliminary report, and no very definite or far-reaching results are claimed for a series of investigations capable of almost indefinite expansion and modification.—A paper on heliotherapy, by Dr. E. Mayer, shows less confidence in the efficacy of this procedure than has hitherto been displayed in the heliotherapy revival of the last few years. At the Trudeau Sanatorium, New York, 31 patients were treated with the mercury quartz lamp, as a substitute for natural heliotherapy. Rises of temperature, hæmoptysis, pleurisy, and other untoward results, seem to have been discouraging factors in certain cases during the treatment, the results of which were "mostly indifferent." The artificial light was in some cases supplemented by true heliotherapy carried out according to Rollier's teaching. The author gives a comprehensive review of the literature, from which he gathers that "we find an occasional enthusiast, but the general opinion prevails of rather modest results in pulmonary tuberculosis, with far greater encouragement in surgical and skin affections."—Another paper from the New York Trudeau Sanatorium deals with the signs, symptoms, and X ray findings in pulmonary tuberculosis. The authors, Dr. F. H. Heise and Dr. H. Sampson, have attempted to establish some basis for the interpretation of skiagrams by a comparison, for the past two years, of the signs and symptoms of every case with laboratory and X ray examinations. Their studies have led them to recognise two types in pulmonary tuberculosis, the peribronchial or lymphatic, and the parenchymatous or alveolar. Taking each by itself, they have found the peribronchial type characterised by infrequency of hæmoptysis (13 per cent. as compared with 42 per cent.), infrequency of medium coarse râles (3 per cent. as compared with 57 per cent.), and scarcity or absence of tubercle bacilli, which were found in only 7 per cent. of this type, as compared with 65 per cent. of the parenchymatous type. This paper is a plea for the recognition of the services of the X rays in prognosis as well as in diagnosis. Under the rays it appears, among other things, that roughly one-half of the incipient cases are of the patchy or parenchymatous type, which is more serious than the peribronchial type.

Veterinary Review. February, 1918. Vol. II., No. 1. Edited by Professor O. CHARNOCK BRADLEY. Edinburgh: Green and Son. Price 3*s.* 6*d.*—The issue for February is full of interest and valuable information to its readers, especially to those who are busy with extra duties at home and to those who are on active service abroad. For each it furnishes, in such a way that it can be read at a glance, an up-to-date summary of the latest researches which are being made into all the numerous subjects which appertain to veterinary service. To veterinary officers engaged on active service it acts as a connecting link between their past professional life and whatever may be their lot in the future, for many of them are practitioners who will return as speedily as possible when the war is over to civil clientèle again. The possession of a review like this keeps them in touch with what is going on in the veterinary world, and for this reason alone it should be subscribed for by everyone. This number contains, in addition to an important array of abstracts, reviews, and notes on books, an "Essai de Bibliographie Hippique" by Sir William Osler, M.D., F.R.S., and a most interesting review of Lord Lister's career under the heading of "The Birth of Modern Surgery." The work put into the little volume of 138 pages reflects great credit on the energy of the editor and his reviewers.

THE LANCET.

LONDON: SATURDAY, MAY 11, 1918.

Medicine and Poor-law Reconstruction.

IN Poor-law administration the conspicuous growth and development of the Poor-law infirmary forms a notable result of the progress of medical science and is also a public acknowledgment and appreciation of medical achievement. If medicine had not progressed, the public authorities would have found the old arrangements adequate—that is certain. In a recent discussion which took place at the Royal Society of Medicine, following an address by Surgeon-Major J. F. GORDON DILL on the future of the medical profession under a Ministry of National Health,[1] Sir ARTHUR NEWSHOLME, the Principal Medical Officer of the Local Government Board, pointed to the wonderful extension in number and elevation in standard of Poor-law infirmaries. He could not have adduced a better proof of the value of the medical work of his department; and the public support of further improvements in the medical service of the infirmaries will remain whatever the public administrative body may be that has in the future the task of providing for the health of those unable to pay for medical attendance through insurance or out of their private resources. The further task of winning appreciation and acknowledgment from the classes now under the Poor-law will still need to be undertaken by the committees proposed as the guardians' successors by the Minister of Reconstruction in his report on the transfer of the functions of Poor-law authorities.

The Finance and General Purposes Subcommittee of the London Panel Committee has now submitted to that Committee a Memorandum dealing with the report from the Minister of Reconstruction, and so far as any reconstruction of the functions of the Poor-law authorities is likely to affect the medical profession in London this Memorandum sheds on the questions involved the light of experience acquired in connexion with the medical treatment of insured persons, combined with equally valuable knowledge gained in general practice. Those responsible for the Memorandum are clearly aware of the necessity for public acknowledgment and appreciation, if medical care for the public health is to be made universally effective, and have consequently had to take into consideration the admitted objection of the industrial classes to the services and institutions provided by the Poor-law authorities, which are overshadowed by the traditional reputation of the "union workhouse" and by terribly tragic errors in the past, some of the most flagrant of which were exposed in these columns. With public sentiment in view, the Memorandum recommends the establishment of two distinct departments of medical service, the one dealing with matters which have in the past been attended to by public health authorities, and the other with the health of the individual. The sanitary service, it suggests, should be provided for by increasing the number and maintaining the status and qualifications of the whole-time assistant medical officers of health who have hitherto worked under the chief medical officer of the health authority. With regard to the clinical service, it expresses in definite terms the opinion that no system of whole-time medical officers, other than resident institutional officers and practitioners devoting themselves to limited sections of professional work, will prove generally and permanently successful. With the above exceptions it is recommended that for domiciliary and institutional purposes the clinical service should be in the hands of practitioners who at the same time are being employed by patients able to make provision for their own medical attendance. For such part-time service payment by capitation fees is advised as likely to prove more satisfactory to all concerned than either payment for services rendered or by salary, and it is submitted that capitation payments, subject to provision against an individual practitioner accepting more work than he can perform efficiently, will give the patient the freest choice of a doctor and bring about a just relation between the work undertaken and the remuneration received. As a matter of detail, the suggestion is added that there should be an agreed capitation payment for such sick persons as are actually accepted as patients.

In so far as the above recommendations, coming from the London Panel Committee differ from those of the Reconstruction Minister's report, they should receive attention from the members of the medical profession most likely to be directly affected by them, and as they are made by a body which is directly responsible only for the safeguarding of the interests of panel practitioners in the metropolis they will no doubt be the subject of criticism in localities where the circumstances of panel practice are widely different, and to which the proposal of the Reconstruction Report (Scheme III. London) does not apply. That proposal is that "medical assistance in the home should be given by the staff of the Medical Officer of Health under Public Health Acts suitably extended." The formal recommendation drafted by the Subcommittee of the London Panel Committee amending this is, that "medical assistance in the home should be given by a part-time service of general practitioners remunerated by capitation grants. A part-time service of specialists and consultants should also be utilised to assist the general practitioners in connexion with domiciliary treatment." In weighing the merits of these or any other forms of medical service for the poor, consideration should be accorded concurrently to three points—that is to say, to the securing of a thoroughly efficient medical service, the ensuring of just treatment for members of the medical

[1] THE LANCET, April 20th, p. 570 et seq.

profession supplying that treatment, and the presentment of it to the class of patients for whom it is devised in such a form that they will generally and willingly have recourse to it. It is especially in this last direction that Poor-law administration was until recent times found wanting.

Tachycardia in the Enteric Group of Infections.

IT is an interesting sign of the times that the exact study of individual symptoms attracts the attention of skilled observers and investigators more and more. Not long ago laboratory and so-called experimental methods dominated research in medicine, and clinical research in the strict sense, that is investigation carried on at the bedside of the patient, was largely ignored. We welcome the return of interest in symptoms and their interpretation, which owes much to the striking and suggestive inquiry by Sir JAMES MACKENZIE and his co-workers into the cardiac arrhythmias. As an illuminating example of the valuable work which can be done in the direction of the analytical study of a given symptom we may refer to the interesting paper published in this week's issue of THE LANCET by Major H. FAIRLEY MARRIS on tachycardia. Major MARRIS has already put on record his work upon the slow pulse common in cases of infection by the enteric group of organisms, and we have referred already to the test he has evolved for this group by the use of atropine.[1] It was a natural transition to study the causes leading to the opposite condition of tachycardia in this class of case.

The method of investigation which Major MARRIS adopted comprised observations by polygraphic records and the study of the cardio-vascular mechanism and its response to various changes. He noted the effects of sleep on the disordered pulse-rate, the length of time for which respiration could be voluntarily suspended, and the effect of changes of posture, as well as the presence or absence of signs and symptoms of heart failure. On the basis of these well-planned observations he has separated four types of cases showing tachycardia during the course of the enteric group of infections, and he gives brief details of one typical case of each type. These records are worth careful examination, both as to the descriptions given and the charts accompanying them, for they illustrate clearly the methods employed and the deductions made from them. In the first type the tachycardia seems to be the expression of permanent damage to the heart induced by the infection, and is therefore cardiac in origin. It will be seen from the case given in illustration that rapid action of the heart persisted throughout the course of the disease, that it did not slow down appreciably during sleep, that breathlessness was present throughout, and that the maximum period of voluntary arrest of respiration was 12 seconds, whereas in healthy controls the breath could be held for periods varying from 20 to 80 seconds. The second type of tachycardia Major MARRIS regards as of toxic origin, as is the first, but the damage is not permanent and the tachycardia is present only while the heart is poisoned. In the case described of this type a tachycardia of what Major MARRIS describes as phasic character occurred for a time, a rapid rate alternating with slower periods. In the early stages the tachycardia persisted during sleep, and the period of voluntary arrest of respiration was markedly curtailed. During convalescence the heart-rate, both in the sleeping and waking states and in the erect posture, was the same as that seen in healthy hearts, showing that the toxic effects had passed off, and the cardio-vascular system was undamaged. The third type of case Major MARRIS confesses to some difficulty in interpreting, but he describes the tachycardia as of vaso-motor origin. In the case described there was in the early stages some dilatation of the heart due to poisoning, but the tachycardia developed during convalescence, together with sweats, tremor, cold and clammy extremities, with dermographia, pointing to disorder of the vaso-motor mechanism. The heart at this time was normal in size and rhythm and its sounds were natural, indicating that the tachycardia was not cardiac in origin, which was confirmed by the fact that the sleeping pulse, the effects of posture, and period of arrest of respiration were all normal. The fourth type of tachycardia is described as the postural or atonic variety. In the case described in illustration the tachycardia occurred when the patient got up from bed for the first time after a moderately severe attack of paratyphoid B, and it was found to be lessened by the application of a tight abdominal bandage. The heart was normal in size and rhythm and in its sounds; the pulse-rate was slow during sleep and fell immediately the patient resumed the recumbent position.

Major MARRIS discusses these types and reduces the four types to three groups, putting the cases of the first and second type into his first group—those due to cardiac lesions; the other two groups are the postural or atonic and that due to instability of the vaso-motor system. For treatment in the cardiac group he recommends that appropriate for actual cardiac disease; in the vaso-motor group his patients were not confined to bed, and gradually increasing exercise, massage, and administration of ammonium bromide seemed to be of use. Likewise, in the postural or atonic variety the patients were not kept in bed, but given massage and tonics. In some cases an abdominal binder was applied with benefit. We have commented on Major MARRIS'S paper at length because it illustrates very well the manner in which research of this kind may not only throw light upon the processes of disease and their effects, but may also give valuable indications for treatment. We hope that similar intensive investigation of symptoms referable to other systems of the body may be regularly published, since with the large number of cases of various diseases incidental to the war present both in civilian and military hospitals, opportunities should be plentiful for collating and contrasting both the evidence of disease and the result of treatment.

[1] THE LANCET, Sept. 29th, 1917.

Annotations.

"Ne quid nimis."

PURIFICATION OF CONTAMINATED SHELL-FISH.

As a sequel to inquiry into some cases of enteric fever which recently occurred in London and were attributed to the consumption of oysters the Local Government Board has issued special regulations under the Public Health (Regulations as to Food) Act, 1907, to prevent further risk arising from oysters taken from Langstone Harbour, the estuary lying between Portsmouth and Havant, and also to protect the public from the danger of consuming raw or imperfectly cooked cockles, mussels, and butter-fish, which may have been taken from the foreshores in any part of the Portsmouth sanitary district. In both cases the shell-fish have very distinct opportunities of becoming dangerously polluted by sewage, and in recent years the medical officer of health of Portsmouth has on many occasions attributed the occurrence of typhoid fever to shell-fish consumption. The new local regulations are explicit and form a distinct advance on the general code which has hitherto governed the action of port sanitary authorities in this matter. The principle adopted is to prohibit the distribution or sale of any oysters from a scheduled area except such as have been relaid in special clean layings at Gutner under a system of permits granted by the medical officer of health of Portsmouth. The permits are only to be given on condition that the oysters are kept separate from those from other sources and remain in the cleansing place for at least 15 days, while the medical officer has to be satisfied with the system adopted and the particulars supplied. As regards cockles, mussels, and butter-fish, no attempt is made to restrict their place of collection or to require any process of self-cleansing, but all distribution and sale of these shell-fish is prohibited unless or until they have been subjected to a process of sterilisation by steaming under pressure in a suitable apparatus for at least six minutes. The sterilising is to be carried out either by the sanitary authority or in a manner approved by the medical officer of health. The fact that risk of sewage contamination of shell-fish still remains in some districts, and that under war conditions little improvement is likely to be made in the purification of sewage or the alteration of the position of sewer outfalls, gives special importance to the enforcement of local regulations of this nature, which, far from exercising a deterrent effect on the shell-fish industry, should encourage the demand for this very useful item in our food-supply.

LIQUID-TIGHT CLOSURE OF WOUNDS.

MANY ingenious methods have been devised for keeping healing fluids in continuous contact with septic wounds, and experience has shown that excellent results have been obtained by the use of means differing both in theory and in practice. One of the most ingenious of these methods we owe to Captain W. H. Taylor and Captain N. B. Taylor, both officers of the Canadian Army Medical Corps, described by them in our present issue. It may be epitomised as irrigation without tubes. By the employment of a water-tight dressing the wound is thoroughly cleansed to its most remote recesses by the alternate penetration and withdrawal of fluid effected by change of pressure. Extensive incisions are thus rendered unnecessary; and the bedding is kept absolutely dry and economy results in the time and trouble taken by renewing dressings, and in the material so saved. It is claimed for the method that it possesses the advantages of other procedures, in which, by means of tubes, liquids are made to pass into the recesses of the wound, and pus and serum are drained away, without the disadvantage of the presence of the tubes themselves. That tubes have drawbacks can hardly be disputed, for they often cause pain, and their presence may interfere with the healing of the deeper parts of the wound. The method of Captains Taylor certainly deserves to be widely tried, and we hope that the opportunity will be given.

THE CAUSATION OF MYOPIA.

THE causation of myopia is a subject of perennial controversy among ophthalmic surgeons. The latest contributor to it, Dr. F. W. Edridge-Green—now well known for his tardily recognised work in a kindred sphere of ophthalmic science, colour-blindness—approaches the subject of myopia from the point of view of hydrodynamics, and comes to conclusions at variance with those of all older authorities. These conclusions, moreover, lead him to recommend a course of life for those threatened with myopia contrary to what may be called the orthodox teaching. The primary and essential cause of myopia, he says, is an obstruction to the outflow of lymph from the lymph space between retina and choroid into the lymph spaces of the optic nerve. The increased intra-ocular tension that is thus caused distends the sclerotic posteriorly where it is weakest, and causes myopia by elongation of the eyeball. He further maintains that the conditions most likely to give rise to myopia in subjects predisposed to it are not convergence of the eyes during reading or sewing but rather the unduly severe muscular efforts involved in lifting heavy weights, coughing, or such pastimes as boxing, wrestling, cycling, rowing, or digging. Dr. Edridge-Green has already replied in our columns to some of the criticisms which his views have naturally excited and is, no doubt, prepared to answer others. Finality has not been reached, and evidently the subject is one on which more investigation is needed. In leaving it for discussion we may recapitulate the questions involved. In the first place, does a lymph space exist between retina and choroid in the sense postulated by Dr. Edridge-Green? We suggest that the matter is possibly simply one of varying nomenclature, the hexagonal pigment layer, which is ordinarily reckoned as the outermost layer of the retina, being, in fact, closely adherent to the choroid and separated from the retina proper by a lymph space corresponding to the primary optic vesicle. Secondly, would not distension of this lymph space necessarily produce detachment of the retina long before it had any effect on the sclera? Dr. Edridge-Green is not very convincing on this point. Thirdly, if myopia is caused by an increase of intra-ocular tension, why do myopic eyes present no symptom of glaucoma? It is admitted that the effect of high tension in young children is different from what it is in adults, and it might be argued that in the case of those globes with a predisposition to myopia the effect of high

tension would be different again. This is a point which might well be cleared up. Finally, setting aside those exceptional cases of high and progressive myopia where predisposition is the dominating factor, the extent and rate of increase of myopia in children does in common experience bear a direct relation to the number of hours during which their eyes are employed in poring over books or needlework in a stooping position. Dr. Edridge-Green doubts the existence of any such relation. But, until the contrary is proved, it will be wise for school medical officers to continue to act on the assumption that the relation exists.

SOUTH-EASTERN UNION OF SCIENTIFIC SOCIETIES.

THE twenty-third annual congress will be held in London from May 29th to June 1st, inclusive, and the programme includes an evening meeting of considerable interest to the medical profession. On Thursday evening, May 30th, at 8 P.M., Sir Ronald Ross will open a discussion on Mosquitoes in England. In view of the investigation by the Local Government Board now proceeding, and to enable those engaged upon the work to be present, the discussion will take place in the Theatre of the Civil Service Commission, Burlington Gardens, Piccadilly, W., and the meeting will be open to all interested in the subject, no tickets being required.

PURPURA ANNULARIS TELEANGECTODES.

UNDER this name Majocchi described in 1895 a new dermatosis which, although in some respects it fits into the varied and complex picture of purpura, yet undoubtedly represents an autonomous dermato-pathological entity with special clinical and anatomical characters of its own. Later, describing two fresh cases illustrated by new and more thorough histological researches, he proposed the name telangiectasia follicularis annulata; but in 1905, summarising his observations in a monograph enriched with several new cases and more accurate investigations, he very properly returned to the former nomenclature, which has since been maintained by nearly every author on the subject. The morphology of the condition is now well established and consists in an endarteritis and endophlebitis obliterans, which commence in the vessels of the subcutis and extend gradually to the capillaries of the whole derma. This vascular occlusion is produced by proliferation of the inner and middle coats, the tunica adventitia not sharing in the process, there being, on the contrary, a slight degree of perivascular lymphocytic infiltration. Hyaline degeneration of the vessels then ensues, with the formation of aneurysmal dilatations, which rupture, giving rise to hæmorrhage and pigmentation. Still later on there are phenomena of œdema, with atrophy and degeneration in the epidermis and whole skin. All these aspects were typically present in a case recently described by Dr. Carlo Rühl, of the Royal Dermatological Institute of Turin,[1] in which the dermatosis was symmetrical and limited to the lower extremities from the dorsum of the foot to the inguinal fold, and had existed for three months. The chief interest of the case, however, consists in the light it throws on the vexed question of the etiology of the disorder. Most observers are agreed that neither syphilis nor tuberculosis plays any part in its causation, while Vignolo-Lutati disclaims any absolute exclusivisms and believes the disease to be a manifestation of some cause of a toxic infective nature in whose development the action of the nervous system plays a contemporaneous part. Dr. Rühl's case is as follows. A soldier, aged 33 years, in whom the Wassermann reaction was negative and who was free from signs of tubercle, which was also wanting in the family history, had formerly been a kiln-man by occupation, and it may be supposed that if he were the subject of a marked rheumatic diathesis, predisposed to rheumatic manifestations, he would have felt the effect of it while thus employed, exposed to damp and great changes of temperature. But the purpuric dermatosis only made its appearance when he took to working as a field labourer, having to stand for many hours during the day with his feet in water or in tall wet grass which soaked him up to the knees. Majocchi, in describing his cases, was unable to find in rheumatic causes any condition, either predisposing or determining, for this disease; in Dr. Rühl's case, however, damp and cold were a very material factor. Nevertheless, it seems that besides this rheumatic factor there was another to be taken into consideration—secondary perhaps—the prolonged erect posture. Bearing on this point, it is worthy of notice that on the ankles where the boots exercised their maximum pressure the eruption was entirely absent, leaving a zone of immunity which contrasted strongly with the parts above and below. And it is therefore probable that the compression exercised by the laced part of the boots protected the skin from the incidence of the purpuric changes by acting as a mechanical factor which prevented the passive vaso-dilatation and congestion produced and furthered by the prolonged erect posture, under the influence, also prolonged, of damp cold.

[1] Il Morgagni: Archives, Jan. 31st, 1918.

EXONERATION OF SURGEON-GENERAL MACNEECE.

IN our report of the proceedings in the House of Commons we recorded last week the statement made by Mr. Macpherson with regard to the position of Surgeon-General J. G. MacNeece. Sir Watson Cheyne asked what had been the result, if any, of the private inquiry by the Army Council into the charges made against this officer in connexion with the campaign in Mesopotamia, when Mr. Macpherson wrote in reply as follows:—

> The Army Council have received and considered a statement of Surgeon-General MacNeece in regard to the findings of the Mesopotamia Commission in his case and have formed the opinion that no blame can be attached to him in regard to the manner in which he carried out his duties in connexion with the medical services during the campaign.

That the private inquiry had arrived at this conclusion was made known to Surgeon-General MacNeece in a confidential memorandum from the War Office, but as that memorandum is worded exactly in the terms of Mr. Macpherson's official statement there can be no indiscretion in stating the fact. But now comes the singular thing. The Army Council have decided that they do not see their way clear to giving publicity to their decision. In other words, Surgeon-General MacNeece can be publicly blamed by the Mesopotamia Commission, but cannot be publicly cleared by the Army Council. We confess to being entirely unable to understand either the justice or the logic of such manners, and hope that all those who derived a wrong impression from the Report of the Mesopotamia Commission as to this officer's behaviour will take notice that the Army Council, after inquiry into the charges made against him, have given him full exoneration.

BOTULISM (?) IN THE METROPOLIS.

THE medical officer of the Local Government Board has drawn attention to the recent occurrence in London of several cases of an obscure disease, associated with cerebral symptoms, and resembling botulism; he has suggested that steps should be taken with a view to providing facilities for diagnosis and for any necessary pathological examination. The Board is now prepared to undertake pathological investigations of suspected cases, and specimens of blood and post-mortem material, where available, should be obtained from patients. The London County Council has decided to place at the disposal of medical practitioners in London the services of its medical staff for consultation in this connexion, and Dr. J. A. H. Brincker, Public Health Department, 2, Savoy Hill, W.C. (Telephone No.: Gerrard 3641), or one of the other medical officers of the Council, will be available for this purpose. Application should in the first place be made to the Medical Officer of Health of the City of London or metropolitan borough in which the case may occur, in a manner similar to that which obtains in suspected cases of cerebro-spinal fever. A succinct memorandum describing the symptoms of the disease has been prepared by Sir Arthur Newsholme and is published by the London County Council for the information of medical men. References are also given to the issues of THE LANCET for the weeks ended April 20th, 1918 (pp. 568 and 580), April 27th, 1918 (pp. 615–616), and May 4th, 1918 (pp. 653 and 654).

Lord Leverhulme has been elected President of the Royal Institute of Public Health.

Professor R. Howden has been appointed the representative of the University of Durham on the General Medical Council.

Dr. Norman Walker has been appointed Inspector of Anatomy for Scotland, in the room of the late Sir James Alexander Russell.

Professor Sauerbruch, for many years director of the surgical clinic at Zurich, has been offered and accepted the surgical chair at the University of Munich.

AT the sitting of the reconstituted National Birth-Rate Commission next Monday, May 13th, Professor Arthur Keith will give evidence as to the need of a permanent anthropometric department.

THE discussion at the Royal Society of Medicine on the Future of the Medical Profession under a Ministry of National Health will be resumed on Wednesday, May 29th, at 5 o'clock, when Sir William Osler will introduce the subject.

THE annual oration of the Medical Society of London will be delivered next Monday, May 13th, at 8.30 P.M., by Dr. Theo. B. Hyslop, on Degeneration: the Medico-Psychological Aspects of Modern Art, Music, Literature, Science, and Religion.

THE Inter-Allied Conference on the After-Care of Discharged Sailors and Soldiers will be held at the Central Hall, Westminster, London, S.W. 1, from May 20th to 25th. The King and Queen will visit the exhibition arranged in connexion with the conference at 12.30 P.M. on the opening day.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Canadian Medical Week in Hamilton, Ontario.

FURTHER details can now be given of the conjoint meeting of the Canadian Medical Association, the Ontario Medical Association, the Canadian Public Health Association, and the Association of the Medical Health Officers of Ontario, to be held in Hamilton, Ontario, from May 27th to June 1st, for which the Canadian medical profession is preparing. I have already referred to the proceedings, and the following are further items of the programme:—

A symposium on the subject of the returned soldier problem, at which the Militia Department at Ottawa will be represented. Addresses or papers by Dr. Charles H. Mayo, Rochester, Minn. (surgery); Professor L. Barker, Baltimore (medicine); Dr. Isaac Jones, Philadelphia (ear); Dr. Thomas McCrae, Baltimore; Dr Leonard Rowntree, Minneapolis; Dr. Casey Wood, Chicago; Dr. Walter Parker, Detroit; Dr. John Wheeler, New York City; Dr. Joseph Beck, Chicago; Dr. H. Halsted, Syracuse; Dr. McGuire, Buffalo; and Dr. Hymman, St. Louis. A pathological museum, including a fine assortment from McGill University, exhibits from the Babies' Hospital, New York City, Queen's University, Kingston, the Western, London, Ont., and the University of Toronto Medical Department. Charts and literature in connexion with the reform propaganda of the American Medical Association.

Dr. H. Beaumont Small, of Ottawa, who has been for 20 years treasurer of the Canadian Medical Association, will preside, Dr. McKenty, of Winnipeg, the president-elect, having resigned, as he feared that under present conditions the western men could not muster a good convention in Winnipeg.

Combating Venereal Disease in Ontario.

The legislation to which I called attention in my last letter has been adopted by the Province of Ontario for the control of venereal diseases in that province. In its completed state it provides that if any person is under arrest or convicted of any offence of the Criminal Code of Canada or any Ontario statutes, he or she may be examined and, if infected, may be treated as the medical officers of health may direct; they may be detained or isolated. If the medical officer of health of any municipality has reason to believe that someone is a danger to the community by reason of being infected with venereal disease he may require that person to produce a certificate from a qualified medical man to the effect that he is not infected. If a person fails to do this the medical officer may direct an examination, and if he finds the person infected he has authority to treat the person, detain him, or isolate if necessary. The general principle of the law is, however, away from segregation, and large powers are given to the board of health of the province in coping with the menace to make regulations. No person but a duly qualified medical man will be allowed to treat such persons. It will be seen that the measure has reached the Statute Book without much modification.

The Blinded in the Halifax Disaster.

The Department of Militia and Defence, Canada, has issued an intermediate medical report of the disaster which overwhelmed Halifax, Nova Scotia, on Dec. 6th last. As nearly as can be estimated, some 1500 people were killed and approximately 5000 injured. Of that number there were totally blind, 41 cases; one eye enucleated, 87 cases; doubtful as yet, 61 cases; total, 189 cases of eye injury. An interval of some 30 seconds took place between the first and second explosions. After the first explosion large numbers of people rushed to their windows and were looking out. The force of the explosion was sufficient to drive bits of glass clean through plaster walls and into doors at the far sides of rooms. As the result of this force and the position of the people pieces of glass were driven into the faces of the onlookers, the eyes being specially affected. Hundreds are disfigured for life with ghastly scars. In addition to the above figures, there are 144 other cases where the final information from the social workers who follow these cases to their homes is yet incomplete. The Æsculapian Club, Toronto, has contributed $200 00 to the Endowment Fund of the Halifax School for the Blind. The report gives the following testimony to the great aid of physicians, surgeons, and nurses from the United States:—

"Too much cannot be said in praise of the American doctors, nurses, and social helpers. Their work was excellent, their spirit willing, and their assistance generous and invaluable. Some of the best surgeons in Massachusetts, Rhode Island, and Maine were represented. Special mention must be made of the American Red Cross unit from Boston, under the very capable leadership of Dr. W. E. Ladd. This unit was fully equipped, and remained in Halifax, doing excellent work, until Jan. 5th, 1918."

SPECIAL SCALES OF RATIONS FOR HOSPITALS.

THE Ministry of Food has issued to the Local Food Offices particulars of special scales of rations for hospitals, sanatoria, and kindred institutions. These scales have been drawn up by the Food Controller after consultation with the medical officers of the Ministry of Food and of the Local Government Board, with the Medical Committee of the Food (War) Committee of the Royal Society, and with an Advisory Committee of Hospital Managers.

The scale for civil general hospitals is as follows, the quantities being the average per head per week, as purchased, for all classes of patients taken together :—

*Meat	16 oz.	Potatoes	70 oz.
†Poultry, or game, or fish	32 ,,	Fresh vegetables	28 ,,
Sardines and other dried or prepared fish	4 ,,	Milk	8·4 pints
‡Bacon (boneless)	4 ,,	Jam	8 oz.
Bread	70 ,,	‖ Rice	8 ,,
Sugar	8 ,,	‖ Oatmeal and pulses ...	4 ,,
Butter and margarine ...	4 ,,	Eggs	4
		§ Cheese	4 oz.

* The term meat denotes meat of all kinds, and the whole or any part of the allowance may be taken out in the form of butcher's meat.

† As from May 5th, and until further notice, a ration of 8 oz. of bacon per head per week may, at the option of the hospital, be substituted for the whole of the ration of 32 oz. of poultry or game or fish per head per week.

‡ Or the equivalent current amount purchasable on one coupon, whichever is the larger.

‖ In Scotland the scale will read—rice, oatmeal, and pulses 12 oz.

§ Cheese should be used as little as possible, and only the less solid kinds.

The civil general hospitals scale is applicable to general hospitals, to most special hospitals, to Poor-law infirmaries, and to the sick wards of other establishments classed as institutions under the meat rationing scheme; and also, under certain conditions, to convalescent homes and nursing homes. It will apply not only to in-patients, but also to the medical, surgical, and nursing staffs.

Special scales have also been drawn up for children's hospitals and for tuberculosis sanatoria (including special tuberculosis wards of other institutions), whilst naval and military patients treated by understanding with the naval or military authorities are entitled to the naval and military hospital patient's scale. The medical, surgical, and nursing staffs of these institutions will receive the civil general hospitals scale, except that at sanatoria they will, if themselves tubercular, receive the same scale as the patients.

Applications to be registered as entitled to a special institutional scale must be made to the Local Food Office. It will be obvious that the same hospital may apply for more than one scale. There may, for instance, be naval and military patients, civilian patients and professional staff, and tuberculous patients in special wards, besides other residents and non-residents receiving ordinary rations as members of the general public.

A COUNCIL OF OPHTHALMOLOGISTS.

A well-attended meeting of ophthalmic surgeons and physicians was held at the rooms of the Royal Society of Medicine on May 2nd for the purpose of forming a representative council, chosen from among members of the specialty, empowered to take action in matters of British ophthalmology arising in connexion with public affairs. Mr. TREACHER COLLINS, President of the Ophthalmological Society of the United Kingdom, was voted to the chair.

Sir ANDERSON CRITCHETT proposed a resolution affirming that such a council should be formed. He said it would meet a definite need, and would tend to weld the elements of ophthalmology more closely together, as well as making for the welfare of the public.

Mr. RICHARDSON CROSS seconded the resolution, remarking that Governments and governing bodies required expert advice in order to be efficient, and the best experts were those who enjoyed the confidence of their colleagues in that special line of practice. Owing to the amalgamation of the journals devoted to ophthalmology into one organ, and the representation on the Ophthalmological Society of the various similar bodies in the kingdom, the section of the profession was now well organised and could present a powerful front on all questions specially concerning it. He instanced ophthalmia neonatorum, Army and Navy visual standards, visual and lighting requirements in various kinds of industry, organised inquiries concerning the blind, grades of compensation payable according to degrees of visual disability, and so on.

Mr. J. B. LAWFORD, in supporting the resolution, said the days were rapidly passing when we could afford to ignore scientific discoveries and the new methods based upon them, and he believed more attention would be paid in the future to the views of representative bodies, and less to the opinions of individuals, however eminent. The State was now more and more assuming the rôle of parent, and, like other parents, would be all the better for sound advice. He would like to see ophthalmology made a compulsory subject of the medical curriculum—a matter on which we were much behind other civilised countries. At present a man receiving the minimal qualifying medical diploma could at once take up the practice of ophthalmology, and if the proposed committee should do no more than insist that men should not take up this work without special training it would fully justify its formation.

Supporting speeches were made by Mr. GRAY CLEGG, Sir GEORGE BERRY, and Dr. G. MACKAY, and the resolution was carried unanimously.

It was further decided that the council should consist of all the past and present Presidents of the Ophthalmological Society of the United Kingdom and of the Section of Ophthalmology of the Royal Society of Medicine as permanent members, four members nominated annually by the councils of each of these societies, and one representative from the Oxford Ophthalmological Congress.

THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND.

SUBSCRIPTIONS TO THE SECOND APPEAL.

THE following subscriptions and donations to the Fund have been received during the week ending May 4th :—

	£	s.	d.		£	s.	d.
Dr. John Fletcher	1	1	0	Royal College of Physicians of London (per Sir Dyce Duckworth, treasurer)	105	0	0
Dr. W. O. Magoris	2	2	0				
Dr. Hodgson Moore ...	1	1	0				
Dr. J. B. Cumming ...	2	2	0				
Dr. J. A. Alston	1	0	0	Dr. Percy Rowland ...	0	10	6
Surg. J. M. Harrison, R.N.	0	10	6	Sir Alfred Pearce Gould	5	0	0
Dr. Archibald Donald ...	5	5	0	Dr. H. Morley Fletcher	3	3	0
Dr. F. W. Garrad	1	1	0	Mr. E. Spencer Evans ...	0	10	0
Dr. Percy Ashworth ...	1	1	0	Dr. W. H. Davies	2	2	0
Dr. R. W. Innes Smith	5	5	0	Dr. G. Rome Hall	1	1	0
Dr. E. C. Duncan	1	1	0	Dr. W. B. Bennett ...	2	2	0
Dr. B. S. Browne	1	1	0	Dr. Herbert Caiger ...	1	1	0
Dr. E. C. Prichard	3	3	0	Capt. T. G. Longstaff ...	4	17	0
Lieut. John Ritchie, R.A.M.C.	1	1	0	Dr. W. Hartigan	1	1	0
				Dr. C. Smyth	2	2	0
Dr. T. Ridley Bailey ...	1	1	0	Dr. David Rice	1	0	0
Monthly Subscriptions.							
Surg. P. G. S. Davis, R.N.	0	10	0	Mr. E. Spencer Evans ...	0	10	0
Sir Alfred Pearce Gould	5	0	0	Dr. Herbert Caiger ...	0	10	6

Subscriptions to the Fund should be sent to the treasurer of the Fund, Dr. H. A. Des Vœux, at 14, Buckingham Gate, London, S.W. 1, and should be made payable to the Belgian Doctors' and Pharmacists' Relief Fund, crossed Lloyds Bank, Limited.

EXETER MATERNITY HOME.—Lady Owen, mayoress of Exeter, recently formally opened a maternity home for poor mothers. The institution has the financial support of the Exeter city council and the lying-in charity, but the maintenance of the home will be mainly dependent upon voluntary subscriptions.

ROYAL INSTITUTION.—The annual meeting of the members of the Royal Institution was held on May 1st, Sir J. Crichton-Browne, F.R.S., treasurer, in the chair. The annual report of the Committee of Visitors for the year 1917, testifying to the continued prosperity and efficient management of the institution, was read and adopted. The report of the Davy-Faraday Research Laboratory Committee was read, and thanks were voted to the president, treasurer, and secretary, to the committees of management and visitors, and to the professors for their services to the institution during the past year. The following were unanimously elected as officers for the ensuing year:—President: The Duke of Northumberland. Treasurer: Sir James Crichton-Browne. Secretary: Colonel E. H. Hills.

Correspondence.

"Audi alteram partem."

ACUTE ŒDEMA OF THE LUNGS.

To the Editor of THE LANCET.

SIR,—Dr. Samuel West's[1] remarks on pneumococcal bronchitis, acute suffocative catarrh of the adult, followed up by the interesting communications of Dr. Theodore Fisher and Mr. Beadon Adams,[2] have been occupied solely with the symptoms and pathology of this remarkable condition. I may, therefore, perhaps be allowed to describe the treatment which has been found efficacious. Before doing so I would emphasise the necessity of more attention being directed to this important subject by the writers of text-books. The best account I have come across is contained in a paper by Dr. Leonard Williams.[3] He gives the history of a case ending suddenly in his presence and discusses the pathology and treatment.

A case I saw in consultation with Dr. F. W. Rix in September, 1912, illustrates the rapidity of onset of the symptoms and the excellent result to be obtained by appropriate treatment.

The patient was a lady of 70 who suffered from diabetes mellitus and valvular disease of the heart. She left home, apparently in her usual condition, to go by motor omnibus to pay an afternoon call. On arriving at her friend's house she was very breathless, and it was with difficulty that she was taken upstairs and put to bed. Dr Rix was immediately summoned, and, finding the patient in a critical state, called me in to see her. On my arrival, rather more than an hour from the commencement of the attack, I found the patient slightly cyanosed, gasping for breath, and coughing up large quantities of a frothy white fluid resembling soapsuds. Her pulse was 120, irregular, small, and of high tension. On auscultation râles were audible all over the lungs. Her condition seemed desperate. Dr. Rix had already injected hypodermically 1/20 gr. of strychnine hydrochlorate. I at once injected 2 gr. of caffeine sodio-salicylate, followed by the injection of 1/100 gr. of atropiae sulphate. Sinapisms were applied to the chest. Within half an hour I had the satisfaction of seeing an improvement in the patient's condition, and I heard later that she was able to be sent home the next day. Dr. Rix tells me that in a subsequent but less severe attack atropine had an equally good effect.

Dr. Leonard Williams in his able article does not mention atropine, but seems to pin his faith on venesection. Dr. James Barr recorded in THE LANCET in 1907[4] a typical case in a man aged 55 years suffering from granular kidney, in whom the attack began on retiring to bed after a convivial evening.

The treatment was as follows. The patient's thorax was incased in sinapisms for two hours and his temperature raised by a number of hot bottles in his bed. He was ordered 5 grains of carbonate of ammonia, 15 minims of compound tincture of camphor, and an ounce of infusion of senega every hour; a tablespoonful of brandy every hour between the doses of medicine. The patient quickly responded to treatment and next day he was, comparatively speaking, well.

Later on in the paper Dr. Barr adds: "In these cases atropine is a favourite remedy with me."

In a second case described by Dr. Barr—a man aged 66 years—a quarter of a grain of morphine and 1/100 gr. of atropine were given hypodermically; this had not much effect, so another 1/100 gr. of atropine and then a 1/50 gr. of atropine were administered. This had the desired effect, the cough and expectoration ceased, and the patient made a good recovery.

In the same number of THE LANCET Dr. Mothersole[5] records a case of acute pulmonary œdema.

This occurred in a man, aged 53 years, in whom he injected hypodermically 1/50 gr. of atropine sulphate and 1/30 gr. of strychine. The result was eminently satisfactory and the patient was able to get about. A month later he was seized in bed with severe dyspnœa, managed to get downstairs, and was dead in five minutes.

Dr. West[6] does not mention atropine in the treatment of acute œdema of the lungs. He advises the use of cardiac and general stimulants, and points out that "the rapidly increasing cyanosis suggests the mechanical relief of the congestion either by dry-cupping or venesection." Sir James Fowler[7] also advises venesection, and the application of turpentine stupes to the front and back of the chest alternately, together with the administration of aromatic spirits of ammonia with ether and digitalis at intervals of three hours. Among the writers of text-books the late Dr. Savill is the only one I can find who fully appreciates the value of atropine. He writes[8]: "Atropine and belladonna have an almost specific action: 1/100 gr. of the former should be given hypodermically at the earliest possible opportunity. The recurrence of attacks cannot be prevented except in those cases where the patient is able to foretell their coming. In these a dose of atropine in time will ward off or very much mitigate the attack."

From the rapid and excellent effect of atropine in the case I have reported and in others which I have cited, together with its action in similar conditions of a milder character in which I have employed this drug, I would urge that it should be used as soon as there are any indications of œdema of the lungs. A 1/100 to 1/50 gr. of atropine sulphate should be injected hypodermically. It is also advisable to employ a cardiac tonic. Most authorities advise strychnine, but I place more reliance on caffeine sodio-salicylate in 2-gr. doses hypodermically. Where there is great cyanosis venesection or dry cupping may be practised, but if atropine be promptly injected I doubt whether either of those measures will be necessary. In most cases a sinapism will give relief. The feet should be kept warm by hot bottles. The room should be warm but well ventilated; the bronchitis-kettle and moist inhalations should be avoided.

I am, Sir, yours faithfully,

F. DE HAVILLAND HALL, M.D.

Wimpole-street, W., April 29th, 1918.

References.—1. THE LANCET, 1918, vol. i., p. 324. 2. Ibid., p. 480. 3. Ibid., 1907, vol. ii., p. 1606. 4. Ibid., p. 1721. 5. Ibid., p. 1722. 6. Diseases of the Organs of Respiration, vol. i., p. 244. 7. Diseases of the Lungs, Fowler and Godlee, p. 231. 8. A System of Clinical Medicine, fourth edition, p. 147.

LYMPHOCYTOSIS IN SOLDIERS.

To the Editor of THE LANCET.

SIR,—Captain D. L. Tate and Captain J. W. McLeod in your issue of April 27th, in a paper on changes in the leucocytes in trench fever, state that "the usual relative proportions of leucocytes amongst soldiers in France is not the 'normal' of the text-books," and "that errors are likely to be made when differential counts made on soldiers, in case of illness, are compared with that standard." They quote a paper of mine on leucocyte changes in gas poisoning and one by Briscoe on irritable heart, and conclude as follows:—

"In neither instance does the writer mention an extensive series of control observations on normal soldiers recently returned from France, and we are probably justified in quoting their findings in support of the conclusion that a relative lymphocytosis is the rule amongst the troops in France."

My observations were not made without controls, as I have carried out differential counts on a very large number of patients from overseas suffering from many different conditions. They will find in my paper in THE LANCET of May 26th, 1917, the statement that "a slight relative lymphocytosis is not an uncommon finding in men from overseas or in anyone, so that no great reliance can be placed upon the sign unless it is marked." I therefore agree with their statement that the "normal" count of the text-books is not that found in many instances in men on service. Whether the percentage of lymphocytes is higher in men serving in France than in men in this country is another question. The normal counts of the text-books are obtained by large series of observations on males and females at various periods of the day and at different ages. My lymphocyte counts in chlorine and phosgene gas cases reached in several instances 60 per cent., and that with a leucocyte count of sometimes 17,000. The change was an absolute lymphocytosis, not merely a relative one.

A relative lymphocytosis obviously may be produced by a diminution in the number of polymorphs or by a stimulation to the lymphocyte-forming tissues. In anæmias and debilitating diseases the former is the main factor, but in cases of chlorine and phosgene gas poisoning which continue to exhibit symptoms (probably owing to chronic irritation of mucous surfaces) the latter is the explanation.

I am, Sir, yours faithfully,

JAMES MILLER,
Capt. R.A.M.C. (T.); O. i/c Laboratory, 2nd Scottish General Hospital.

Edinburgh, April 30th, 1918.

THE ETIOLOGY AND TREATMENT OF "TRENCH FOOT."

To the Editor of THE LANCET.

SIR,—While the paper on this subject in your issue of April 20th by Major J. E. Sweet, Major G. W. Norris, and Lieutenant H. B. Wilmer presents several points of interest to those who are familiar with blood-pressure problems, it is somewhat difficult to understand the choice of the index which the authors used in the measurement of diastolic blood pressure by the auditory method. The fifth phase in the transition of sounds as the pressure falls appears to have been chosen by them rather than the fourth phase "owing to the difficulty of identifying the onset of the fourth phase

in an artery as small and as difficultly accessible to the stethoscope as the posterior tibial." The diastolic pressure index on which there is now general agreement is the point at which the loud sharp sounds change to dull muffled sounds—the fourth phase of Ettinger. The difficulty in the normal individual is to detect the dull sounds at all, so that the fifth phase of Ettinger or disappearance of sound is a very difficult end-point and also a very variable end-point.

The possibility of making accurate diastolic measurements depends on the lumen of an artery; the posterior tibial artery investigated by the authors is a very much smaller artery than the brachial, and the effect of narrower lumen is to lower the pressure at which the systolic index is obtained and to raise that at which the diastolic index occurs. The presence of congestion and stagnation of blood distally to the armlet, as pointed out by MacWilliam and Melvin, may impair the validity of the auscultatory criteria.

The authors themselves rightly attach far less weight to the diastolic readings in the leg. While their attempt to secure diastolic readings gives their work a completeness it would otherwise not have had, yet analysis of their data of pulse-pressure range shows that these are unreliable. The phenomenon of a higher systolic pressure in the leg than in the arm in the recumbent posture, as met with in other clinical conditions, may be due to (*a*) increased muscular tone of the arterial wall, this being held either to resist compression (MacWilliam, Kerson, and Melvin) or to facilitate conduction of the systolic wave (Hill, Flack, and Rowlands); (*b*) actual pathological rigidity of the arterial wall. If the authors had oscillated the armlet (Hill, Flack, and Rowlands) or massaged the artery (MacWilliam, Kerson, and Melvin) the existence or absence of increased muscular tone would have been accurately determined in accordance as the subsequent readings were lower or remained unchanged when compared with the initial reading. It ought to be clearly understood that at present there is no evidence that the increased muscular tone which gives high readings of systolic pressure is due to vaso-constrictor, or absence of vaso-dilator, influence. There is no proof that vaso-motor nerves can influence the readings of systolic pressure by increasing or diminishing the tone of the arterial wall on which the compressing pressure of the armlet is applied.

The paper is one of decided interest, and not least for its frank adoption of views on the circulation which have in the past been strenuously advocated by Leonard Hill.

We are, Sir, yours faithfully,

JAMES M. MCQUEEN,
Captain, R.A.M.C. (T.).
R. A. ROWLANDS.

London Hospital, Whitechapel, E., May 6th, 1918.

THE PARLIAMENTARY REPRESENTATION OF THE COMBINED UNIVERSITIES.

To the Editor of THE LANCET.

SIR,—With regard to the reply of the chairman and honorary secretary of a Conservative and Unionist Association formed to secure the election of a Member of Parliament for the seven combined universities to my letter published on April 20th, I desire to point out that I did not express my party political views. I objected to any candidate being asked to express his party political views. The universities concerned were never formed for party political purposes; the graduates did not depend on their party political "views" to obtain their degrees; and this association has advanced no arguments to justify the introduction of party politics now.

Belfast University is finding a medical candidate without looking to a party in politics for any assistance. Surely the medical graduates in the seven universities can do likewise. Who will start the ball?

I am, Sir, yours faithfully,

Hove, Sussex, May 4th, 1918. E. ROWLAND FOTHERGILL.

ERYTHRŒDEMA.

To the Editor of THE LANCET.

SIR,—I was much interested to see your reference in THE LANCET of April 27th to Dr. H. Swift's pamphlet on "Erythrœdema," and so far as I am aware the condition has not been previously described. During the past year we have had under observation in the Infants' Hospital several cases of a similar nature, ranging in age from 8½ to 18 months. The symptoms in all these cases corresponded accurately with those described by Dr. Swift, but the temperature in most cases, though frequently subnormal, was subject to greater variation. Also in some cases the attack was undoubtedly precipitated by the cutting of a tooth, and in three of these there were definite signs of cerebral irritation and meningismus. In five cases varying degrees of acidosis were present. It may be of interest to note that in three cases the Wassermann reaction was positive.

I am, Sir, yours faithfully,

Bradford, May 6th, 1918. J. S. DOAK, M.B. Edin.

Obituary.

BERNHARD OTTO KELLNER, M.D., C.M. BERLIN.

Dr. B. O. Kellner, who died at Bloemfontein on March 15th, aged 81 years, was son of the Rev. F. H. Kellner, of Charlottenburg, and migrated to South Africa in 1863, where he built up an extensive medical practice in the Orange Free State. He held many official positions under the then Republican Government, and was for 11 years a member of the Volksraad, where he represented Fauresmith, Ladybrand, and Hoopstad. During the presidency of Mr. F. W. Reitz, Dr. Kellner founded the National Hospital at Bloemfontein, and he was mayor of the city for nine years, and one of the prime movers in starting the National Museum. When Lord Roberts occupied Bloemfontein during the Boer War in 1900, the keys of the city were handed over to him by Dr. Kellner in conjunction with Sir John Fraser and Landdrost Papenfus. Dr. Kellner represented Bloemfontein at the coronation of King Edward, and received the South African War Medal for services rendered during the British occupation. His great hobby was gardening. He leaves a family of six sons and daughters.

OSWALD MEREDITH JONES, F.R.C.S. ENG.

Mr. O. Meredith Jones, who died at Victoria, British Columbia, on April 3rd, was for many years a leading practitioner on the Pacific Coast. A Welshman by birth, he was a student of the London Hospital, and it was at the suggestion of Sir Andrew Clark that he entered the Navy, where he at once became conspicuous for his surgical ability. Joining the flagship on the Pacific station, he left the service to take up practice in Victoria, where he married, and speedily became a notable surgeon in the district, doing much by his example to raise the level of surgical practice. He gave long service on the council of the British Columbia College of Physicians and Surgeons and on the Canadian Council, and was recognised as a sagacious adviser on medical matters, whether affecting the profession or the public. He will be specially missed by medical officers in the Navy, to whom his house was always open.

THE death occurred of Surgeon-Major Edward Louis McSheehy, on May 1st, at Wimbledon, aged 84. He received his first commission in 1857, retiring on half-pay in 1877. He served in the China War of 1860.

THE late Mr. Thomas Parkyn Blades, who qualified L.R.C.P. & S. Edin. in 1890, began his professional work at Stockport, where he was house surgeon to the infirmary. In 1891 he went to Romiley and for over 25 years practised there, gaining the regard and confidence of all who knew him. The funeral, which took place on April 27th, was attended by a representative gathering, the coffin being carried to the grave by a military detachment.

MANY members of the medical profession will hear with deep regret of the death, on April 24th, of Mr. Munro Scott, who from 1880 to 1910 held the important post of Warden of the Medical College of the London Hospital. During the whole of this period Mr. Munro Scott served that institution with the greatest zeal and devotion, and was rewarded by seeing it steadily advance in influence and prosperity. Conservative in his outlook, he relied on the maintenance of a high standard on old traditional lines. A man of great perspicacity, wide experience, and sound judgment—a man, too, of warm heart and genial humour—he will be long and honourably remembered by all who knew him.

The War.

THE CASUALTY LIST.

THE following medical officers appear among the casualties announced since our last issue :—

Killed.

Capt. H. E. Robinson, R.A.M.C., attached West Yorkshire Regiment, received his medical education at St. Bartholomew's Hospital, London, and qualified in 1915.

Capt. R. S. Kennedy, M.C., R.A.M.C., was educated at Cambridge University and at Guy's Hospital, London, and qualified in 1912. Previous to joining the R.A.M.C. he held the appointment of inspector of the Ankylostoma Hospitals of the Egyptian Government. The award of the M.C. was recorded in THE LANCET of Oct. 6th, 1917, p. 550.

Capt. T. J. Fehily, R.A.M.C., attached Royal Fusiliers, qualified in Ireland in 1908. He held appointments at the Jervis-street Hospital, Dublin, and at the Devon County Asylum, Exminster. Previous to joining the R.A.M.C. he was assistant medical officer at the County Asylum, Rainhill.

Died of Wounds.

Major W. S. Garnett, Australian A.M.C., qualified at Melbourne in 1910, and was at the Children's Hospital in that city prior to joining the Expeditionary Force.

Capt. J. A. MacKenzie, R.A.M.C., attached Durham L.I.

Capt. D. McKinnon, R.A.M.C., attached Highland L.I.

Died of Injuries.

Surg. R. W. Brander, R.N., qualified at Glasgow in 1914, and prior to joining the R.N. was resident assistant to the Regius Professor of Surgery at the University of Glasgow.

Wounded.

Lieut. G. L. Gall, R.A.M.C., attached Gloucester Regt.
Capt. H. L. Gauntlett, R.A.M.C.
Capt. A. Malseed, M.C., R.A.M.C., attached Liverpool Regt.
Capt. A. F. L. Shields, R.A.M.C., attd. Oxford & Bucks L.I.
Capt. E. S. Cuthbert, R.A.M.C.
Major J. B. Lowe, R.A.M.C.
Major A. W. Rattrie, R.A.M.C.
Brevet-Major N. W. Stevens, R.A.M.C.
Capt. P. R. Woodhouse, M.C., R.A.M.C., attd. Irish Guards.
Capt. C. H. Leedman, M.C., Australian A.M.C.
Lieut.-Col. A. L. C. Gilday, Canadian A.M.C.
Capt. G. Fleming, R.A.M.C., attached Linc. Regiment.
Capt. J. G. Hill, R.A.M.C., attached Durham L.I.
Capt. H. Symonds, Australian A.M.C.
Capt. W. A. N. Fox, R.A.M.C.
Capt. G. T. MacLean, R.A.M.C., attached S. Lanc. Regiment.
Major J. Purdie, M.C., R.A.M.C.
Capt. F. C. Harrison, R.A.M.C., attached D. of Well. Regt.
Capt. O. D. B. Mawson, R.A.M.C., attached North'd Fus.
Capt. H. E. Williams, R.A.M.C., attached Border Regt.
Capt. A. B. Simes, Canadian A.M.C.

Wounded and Missing.

Capt. R. D. McGregor, R.A.M.C., attached Welsh Regt.

Missing.

Capt. A. H. Little, R.A.M.C.
Capt. S. A. Forbes, R.A.M.C., attached Rifle Brigade.
Capt. C. O'Malley, R.A.M.C., attached Middlesex Regt.
Capt. A. G. Clark, M.C., R.A.M.C., attached S. Lanc. Regt.
Capt. J. P. McVey, R.A.M.C., attached Norfolk Regt.
Capt. H. W. White, R.A.M.C.
Capt. S. V. P. Pill, R.A.M.C., attached Wilts Regiment.

Prisoners in German Hands.

Capt. R. W. Hodgson-Jones, R.A.M.C.
Capt. J. Tate, R.A.M.C.

Previously reported Missing, now reported Prisoners in German Hands.

Capt. J. G. M. Molony, R.A.M.C.
Capt. J. C. Muir, R.A.M.C., attached Durham L.I.
Capt. S. Smith, R.A.M.C.
Capt. T. E. A. Carr, R.A.M.C.
Capt. H. B. Jones, R A.M.C , attached Bedford Regiment.
Capt. J. P. Thierens, R.A.M.C.

We learn from Mrs. Christie that her husband, Capt. W. M. Christie, R.A.M.C., officially reported as "Missing" (THE LANCET, April 13th, 1918, p. 546), is a prisoner of war in the hands of the Germans.

CASUALTIES AMONG THE SONS OF MEDICAL MEN.

The following additional casualties among the sons of medical men are reported :—

Lieut. D. C. Crerar, R.F.A., attached R.E., killed in action, fifth surviving son of the late Dr. J. Crerar, of Maryport, Cumberland.

Major E. A. G. Snell, killed in action, only son of Dr. G. Snell, late of the Colonial Medical Service.

Capt. H. M. Boucher, Somerset L.I., killed in action, only surviving son of the late Dr. A. H. Boucher, of Hertford.

Second Lieut. G. E. H. Peskett, Duke of Wellington's West Riding Regiment, reported missing in May, 1917, now officially presumed to have died, eldest son of the late Dr. A. W. C. Peskett, of Preston, Brighton.

Capt. A. B. McBride, Bedfordshire Regiment, died of wounds, elder son of Major J. B. McBride, R.A.M.C.T., of Berkhamsted, Herts.

Capt. N. H. Stone, M.C., Worcestershire Regiment, killed in action, eldest son of Dr. H. S. Stone, of Reigate.

Capt. J. E. Trevor-Jones, M.C., attached Rifle Brigade, killed in action, second surviving son of Major E. J. Trevor Cory, R.A.M.C., of Cardiff.

Capt. W. G. D. Butcher, London Rifle Brigade, killed in action, youngest son of Dr. W. D. Butcher, of Ealing, London, W.

AUXILIARY ROYAL ARMY MEDICAL CORPS FUNDS.—A quarterly committee meeting was held at 11, Chandos-street, Cavendish-square, W., on April 26th, when grants were made to the orphans of three commissioned officers of the Auxiliary R.A.M.C., and to the widows of three of the rank and file of the Auxiliary Branch of the R.A.M.C. Applications for grants and subscriptions to the funds should be addressed to the honorary secretary, 11, Chandos-street, Cavendish-square, W. 1.

HOSTELS FOR DISABLED MEN.—A new Eccentric Club hostel was opened at 5, St. Agnes-place, Kennington Park, on May 2nd, by the Lord Mayor of London. The house has been provided by Mr. Walter De Frece for the accommodation of disabled and discharged men from Roehampton Hospital while they are learning trades, and will contain 25 beds. This is the thirteenth hostel which the Eccentric Club has fitted up, but, as Mr. Montague Bates pointed out, there is a waiting list at Roehampton Hospital of many thousands. Already the club has provided for nearly 500 of these men, and five more hostels will shortly be opened. Mr. G. N. Barnes, M.P., expressed his hearty approval of the work of the club, and Mr. Hodge said that when he undertook the work of looking after disabled men the Eccentric Club gave him the first support towards providing a fund, which now amounted to over £83,000. He believed that in a few days the fund would amount to £100,000, and after that he hoped that it would gather like a snowball.

RED CROSS WORK IN INDIA.—Following the example of the parent order, the St. John Ambulance Association in India affiliated itself in August, 1916, to the Joint War Committee in England under the title of the Indian Branch of the Joint War Committee of the Order of St. John and the British Red Cross Society. Whilst leaving untouched the civil side of the St. John Ambulance Association, the amalgamation has promoted efficiency as regards Red Cross work, as the first annual report of the activities of the Indian committee testified. 645 nurses and nursing orderlies have been provided, while a further demand for 100 nurses is being met. A total of 113 motor ambulances, charabancs, and touring cars has been supplied, and 22 launches for Mesopotamia, including two mobile laboratories, one of which is fitted with special bacteriological equipment. The committee also undertakes the upkeep of the Lady Chelmsford Special Red Cross X Ray and Electro-therapeutic Hospital at Dehra Dun. Red Cross representatives have been appointed at the headquarters of each division, divisional area, and independent brigade in order that the demands for Red Cross comforts may be readily complied with, and military hospitals are now as far as possible supplied by the local working centres instead of having to rely on the Red Cross depôt at Bombay for their requirements. The various Red Cross organisations throughout India, including Burma, have been for the most part amalgamated with the Joint War Committee, and are now working in conjunction with it.

OBITUARY OF THE WAR.

LLEWELYN ALFRED HENRY BULKELEY, M.B., B.S. DURH.,

CAPTAIN, ROYAL ARMY MEDICAL CORPS.

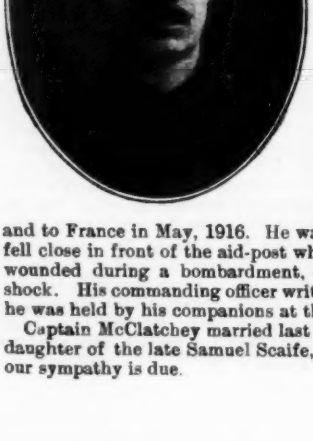
Captain L. A. H. Bulkeley, who was killed in action in France on April 10th, aged 37, was third son of Canon H. J. Bulkeley, rector of Coddington, Herefordshire. Educated at Uppingham, he graduated in medicine at Durham University in 1904 and held resident appointments at Darlington Hospital and the Royal Victoria Infirmary, Newcastle-on-Tyne, afterwards building up a large general practice at Gateshead. At College he was keen on out-door sports, winning a number of athletic prizes. Captain Bulkeley joined the R.A.M.C. in March, 1917, and had lately signed on for the continuance of the war. He was at work in his aid-post which occupied a cellar when a shell exploded in it, killing him instantaneously. Letters from fellow officers in France testify to the value of his work there. "Many times he has displayed the utmost bravery under conditions of extreme danger." "His courage and devotion during the recent battle were of the utmost service to his battalion at what was a very critical time." "I was much impressed then with his coolness and the way he handled the wounded."

Captain Bulkeley married in April, 1915, the youngest daughter of Dr. James Lawrence, of Darlington, and leaves a widow and one son.

SAMUEL EDWARD McCLATCHEY, M.B., CH.B. MANCH.,

CAPTAIN, ROYAL ARMY MEDICAL CORPS.

Lieutenant S. E. McClatchey, who was killed in action in France on March 25th, at the age of 37 years, was youngest son of the late Robert McClatchey, town clerk of Portadown, co. Armagh. He took his medical degree at Victoria University, Manchester, in 1911, following with a house appointment at the Royal Infirmary, Preston, where he then started in practice. He volunteered for service on the outbreak of hostilities, going to Aldershot in September, 1914. In 1915 he was working in Serbia, where he was awarded the Order of St. Sava in recognition of his services. Later he was sent to Malta, and to France in May, 1916. He was killed by a shell which fell close in front of the aid-post where he was dressing the wounded during a bombardment, dying almost at once of shock. His commanding officer writes of the esteem in which he was held by his companions at the front.



Captain McClatchey married last September Gladys Edith, daughter of the late Samuel Scaife, of Manchester, to whom our sympathy is due.

SYBIL LONIE LEWIS, L.R.C.P. & S. EDIN.,

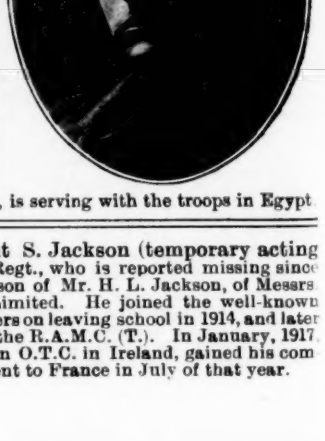
ORDER OF ST. SAVA;
SCOTTISH WOMEN'S HOSPITALS.

Dr. Sybil Lewis, who died at Kingston-on-Hull on March 10th from illness contracted on long service with the Serbian Army and refugees, was 43 years of age and a student of Edinburgh Medical College for Women, where she obtained her diplomas in 1905. Settling in Hull in partnership with Dr. Ada Jackson, she combined with the duties of a large general practice that of school medical officer and adviser to the Diocesan Maternity Home and the West Hull Creche. In the spring of 1915 she went out to Serbia as assistant M.O. to the American Unit (Dr. Alice Hutchinson in charge) of the Scottish Women's Hospitals, where she had to deal with typhus cases at Kragujevatz. After capture by the Austrians and release via Switzerland, she returned to Serbia in the following year to work among the refugees, and was present at Monastir during the great conflagration, being awarded the Serbian decoration of the Order of St. Sava, fourth class. Returning home last December she resumed her professional work, but succumbed to an attack of acute illness.

THOMAS LOUIS ENRIGHT, L., L.M., R.C.P. & S. I.,

CAPTAIN, ROYAL ARMY MEDICAL CORPS.

Captain T. L. Enright, who was accidentally killed in Salonica on March 19th, at the age of 29, was third son of James Enright, of Listowel, co. Kerry. Educated at St. Michael's College, Listowel, and Skerry's Institute, he took his clinical study at King's College, London, and Dublin University, obtaining his diplomas in 1914. During his student years he was honorary secretary of the Dublin University Athletic Union and of the Hurling Club. After holding house appointments at the General Hospital, Nottingham, and the Hackney Union Infirmary, he obtained a commission in the R.A.M.C., being first sent to France, and in December, 1915, to Salonica, attached to a Field Ambulance, and later to a motor-ambulance convoy. He was returning in his car from duty at a neighbouring hospital when a native attempted to cross the path (there are no roads in Salonica), the car overturning and killing him instantaneously. His commanding officer writes that although he had only been with his unit for a month, Captain Enright had won the admiration of his brother officers, and was well loved by the men. His brother, Capt. J. I. Enright, R.A.M.C., is serving with the troops in Egypt.



Second Lieutenant S. Jackson (temporary acting Captain), West Yorks Regt., who is reported missing since April 24th, is the only son of Mr. H. L. Jackson, of Messrs. H. K. Lewis and Co., Limited. He joined the well-known firm of medical publishers on leaving school in 1914, and later enlisted as a private in the R.A.M.C. (T.). In January, 1917, he was transferred to an O.T.C. in Ireland, gained his commission in May, and went to France in July of that year.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND.—At the Final Examination held recently the following candidates were approved in the undermentioned subjects, but are not eligible for diplomas:—

Medicine.—A. Abelson, University College; Annie Hardy Banks, St. Mary's; M. M. Benaroya, University College; M. V. Boucaud, St. Bartholomew's; M. C. Breese, Westminster; J. C. Brown, Birmingham; H. G. Burford, Oxford and Guy's; J. D Byrd, Manchester and St. Bartholomew's; C. R. Cade, Guy's; F. Cavers, University College; A. W. Cocking, Guy's; T. Colley, Manchester; N. C. Cooper, Bristol; Nora Annie Crow, Royal Free; P. C. Datta, Edinburgh; E. S. Davies and I. Davies, Westminster; F. S. Drewe and C. T. J. N. Drobig, St. Thomas's; C. B. Dyson, University College; A. Eidinow, London; F. K. Escritt, Guy's; P. Faraci, Middlesex; Lilian Mabel Fisher, Royal Free; G. H. FitzGerald, R. Gainsborough, and C. Gill-Carey, Guy's; S. V. Goldhurst, Cambridge and London; L. B. Graham, Toronto; Gwenvron Mary Griffiths, Royal Free; D. P. Guilfoyle, St. Bartholomew's; C. H. S. Horwitz, Guy's; Phoebe Annetta Ince, Liverpool; J. Joffe, Guy's; S. S. Lindsay, St. Thomas's; H. C. McAlister, Toronto; J. J. M. MacDonnell, St. Thomas's; A. Y. Massouda, Guy's; J. R. Mitchell, Cambridge and St. Thomas's; A. Moore, Birmingham; A. R. Neckles and G. Noott, Guy's; A. Othman, St. Thomas's; H. Palmer, London; T. Patterson, Oxford and St. Thomas's; A. E. B. Paul, University College; J. C. Pauw, London; G. F. Peters, Guy's; P. G. Quinton, University College; Frances Elinor Rendel, St. Mary's; C. C. Rowland, London; N. Rumboll, Cambridge and St. Bartholomew's; Elizabeth Dill Russell, Royal Free; M. Sarkies, Middlesex; J. A. A. P. Scott and B. L. Slater, London; V. A. T. Spong, St. Bartholomew's; A. T. Spoor, Cambridge and St. Thomas's; G. S. Swan, Liverpool; A. D. Symons, Bristol; G. M. Thomas, Guy's; E. S. Toogood, Oxford and University College; R. H. Turner, Bristol; Elsie Maud Visick, Royal Free; D. Wallace, Cambridge and London; Y. S. Wan, University College; H. P. Warren, London; A. H. Willson, Oxford and London; S. Wolff, Guy's; and V. D. Wyborn, Charing Cross.

Midwifery.—W. M. Anthony, St. Thomas's; J. B. Barnett, Birmingham; L. H. Bertram and W. L. Berry, St. Bartholomew's; Ursula Poussett Blackwell, Royal Free; G. Blurton, Birmingham; Beryl Bolton, Royal Free and St. Mary's; T. G. D. Bonar, Guy's; Sarah Aileen Florence Boyd-Mackay, Royal Free; H. M. Brown, Guy's; H. C. H. Bull, St. George's; F. T. Burkitt, Cambridge and St. Bartholomew's; C. R. Cade, Guy's; H. Carter, London; W. M. Casper, Cambridge and St. Bartholomew's; B. Y. H. Christmas, Middlesex; C. B. Clarke, Cambridge and University College; E. H. Cluver, King's College; A. W. Cocking, Guy's; T. Colley, Manchester; N. C. Cooper, Bristol; A. I. Cox, Middlesex; J. H. Crosskey, Birmingham; C. L. Curle, Guy's; J. J. P. de Chaumont, Charing Cross; C. C. R. Downing, University College; F. A. Evans, Manchester; G. P. Evans, St. Mary's; V. N. Fenton, Cambridge and London; Lilian Mabel Fisher, Royal Free; G. W. T. H. Fleming, Durham; J. T. T. Forbes and A. A. Forty, Guy's; H. Franklyn, Cambridge and St. Bartholomew's; R. Gainsborough, Guy's; Dorothy Winifred Gowers and Margaret Hammond, Royal Free; L. Handy, St. Bartholomew's; E. A. Hardy, Charing Cross; T. Hare, St. Mary's; G. G. Havers, Cambridge and St. Bartholomew's; Christopher Thomas Helsham, Guy's; A. W. Holgate, University College; T. Huddleston, St. Mary's; G. R. Hull, St. Thomas's; Phoebe Annetta Ince, Liverpool; J. A. Iswariah, Madras and University College; R. D. Jones, St. Bartholomew's; V. J. F. Lack, London; L. J. M. Laurent, University College; H. S. Le Marquand, St. Thomas's; P. C. Livingston, Cambridge and London; Lillian Lowenstein, Royal Free; G. Lyon-Smith, Cambridge and St. Bartholomew's; E. K. Macdonald and C. D. Maitland, St. Thomas's; F. B. Matthews, Middlesex; V. G. Mobile, Bombay; D. O'Donovan, University College; A. N. N. Panikker, Edinburgh; F. P. N. Parsons, Cambridge and University College; A. E. B. Paul, University College; G. F. Peters, Guy's; A. E. I. Phillips, University College; I. M. Rattray, St. George's; C. N. Read, King's College; Frances Elinor Rendel, St. Mary's; G. P. N. Richardson, Cambridge and St. Mary's; L. I. Roberts, University College; E. N. Showell-Rogers and A. H. J. Smart, Cambridge and St. Thomas's; C. M. Strong, Manitoba; G. S. Swan, Liverpool; G. M. Trist, Charing Cross; Norah Edith Trouton, St. Mary's; H. P. Warren, London; and J. Whittingdale, Cambridge and St. Bartholomew's.

Surgery.—B. F. Armitage, Cambridge and St. Bartholomew's; F. J. Bennett, Cambridge and Manchester; G. Blurton, Birmingham; F. S. Drewe, Oxford and St. Thomas's; D. W. Evans, Bristol and London; D. C. Farquharson, St. Mary's; F. L. Fonseka, Ceylon and St. Mary's; T. A. Jones, Cambridge; A. S. Lawson, Toronto; W. A. W. Parkes, Birmingham; R. H. Parry, Middlesex; C. G. J. Rayner, St. Bartholomew's; A. G. M. Severn, Guy's; J. H. Sheldon, King's College; M. S. Thomson, Cambridge and King's College; A. H. Turton, Birmingham; J. Whittingdale, Cambridge and St. Bartholomew's; and S. C. Woodhouse, London.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held recently the following candidates passed in the subjects indicated:—

Surgery.—D. A. Dyer (Section II.), St. George's Hospital; C. W. Hayward (Sections I. and II.), University College Hospital; S. C. Ho (Sections I. and II.), Cambridge and London Hospital; and G. L. Mitchell (Sections I. and II.), Glasgow and Birmingham.

Medicine.—N. Cheua (Section I.) and A. E. Collie (Section II.), Middlesex Hospital; M. Girgis (Sections I. and II.), University College Hospital; and S. V. Goldhurst (Sections I. and II.), Cambridge and London Hospital.

Forensic Medicine.—N. Cheua, Middlesex Hospital; M. Girgis, University College Hospital; S. V. Goldhurst, Cambridge and London Hospital; H. A. Hughes, Zurich; T. A. Jordan, Manchester; and C. W. Lakin, Guy's Hospital and Birmingham.

Midwifery.—H. Carter, London Hospital; G. F. Smith, Manchester; and W. J. Wood, University College Hospital and Leeds.

The Diploma of the Society was granted to the following candidates, enabling them to practise medicine, surgery, and midwifery: C. W. Hayward, S. C. Ho, and G. L. Mitchell.

LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY.—The annual meeting of the members of this society will be held at 32, Craven-street, London, W.C., on May 15th at 4 P.M.

DONATIONS AND BEQUESTS.—Captain D. Pass has given £5000 towards the erection of residential quarters for men students upon a site recently presented to Bristol University by Mr. Henry H. Wills.—Dr. and Mrs. Mark Jackson have given £500 for the endowment of a cot at the North Devon Infirmary, Barnstaple.

AMBULANCE LECTURES AND DEMONSTRATIONS.—A summer course of special lectures and demonstrations on Ambulance Work and First Aid will be held in the lecture-hall of the College of Ambulance, 3, Vere-street, London, W.1, on Thursday afternoons in May, June, and July, at 4.30 P.M. Medical officers of health, practitioners, nurses, health visitors, and others engaged in public health duties are invited to attend. The first lecture is (May 16th) by Sir James Cantlie, on Ambulance and First Aid for the Agricultural Worker, Dr. E. I. Russell, F.R.S., in the chair. There is no fee for admission.

R.A.M.C. FUND AND R.A.M.C. BENEVOLENT SOCIETY.—The annual general meeting of the R.A.M.C. Fund will be held in the Library of the R.A.M.C. College, Grosvenor-road, S.W., at 2.30 P.M., on Monday, June 10th, when the Director-General will preside. It is hoped that all subscribers who can spare the time will be present and will freely express their views on any point connected with the Fund. The annual general meeting of the R.A.M.C. Benevolent Society will take place immediately afterwards. Any officers desiring information regarding these funds are requested to communicate with Lieutenant-Colonel E. M. Wilson, R.A.M.C., the secretary, at 124, Victoria-street, S.W., beforehand, so that there may be no delay in dealing with any questions asked.

CENTRAL COUNCIL FOR DISTRICT NURSING IN LONDON.—A conference on Maternity Nursing in London is to be held on Tuesday, June 4th, at 5 P.M., in the board-room of the Metropolitan Asylums Board, London, E.C., to consider the need of further provision, or organisation, of maternity nursing in London. The conference will proceed to discussion under the following heads:—

(*a*) To what extent is it desirable and practicable that maternity nursing should be undertaken by District Nursing Associations in London?

(*b*) The relation of maternity nursing to midwifery, and, in particular, whether it is essential that the maternity nurse should hold the C.M.B. certificate.

(*c*) The question of coöperation with the hospitals for the purpose of nursing the extern maternity cases.

Sir William J. Collins will preside and open the discussion.

MILITARY MEDICAL SERVICE.—The Council of the National Medical Union unanimously passed the following resolution at its meeting on May 4th:—

That the National Medical Union heartily approves of the principle of compulsory medical service of a purely military nature as set forth in the second Military Service Act, 1918. The Union at the same time strongly disapproves of any attempt to extend compulsion in respect of civil practice, and in conformity with its policy continues to decline service under the National Insurance Acts, 1911-1913. While taking this attitude, it nevertheless desires to promote in every way the adequate medical care of the civilian population, to secure which it advocates the suspension during the war of the Medical Benefit Section of the National Health Insurance Acts.

EAST SUSSEX MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held at the East Sussex Hospital, Hastings, on April 26th. Dr. Walker Overend gave an X ray demonstration of certain diseases of the chest by means of lantern slides, commencing with the normal chest in the anterior, posterior, right antero-lateral, and left antero-lateral positions. Several slides were then shown of hilar and peritracheal phthisis in various stages, of interlobar tubercle (discrete and confluent) and its subsequent development either into ordinary disseminated peribronchial phthisis or into a slow, advancing fibro-caseous form, with the formation of cavities in the interlobar area, which are often silent to the stethoscope. In one example the interlobar opacity was grafted on pneumoconiosis. Radio-slides of disseminated peribronchial tubercle, unilateral and bilateral, active and progressive, stationary and arrested, with the production of cavities, and of chronic indurated phthisis and unilateral pure fibroid lung were also exhibited. Slides of lung containing metal fragments, of asthma, emphysema, commencing and resolving pneumonia, Hodgkin's disease, and mediastinal sarcoma affecting the paratracheal glands, before and after X ray treatment, and of bronchiectasis and subphrenic abscess completed the demonstration.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Criminal Law Amendment and Sexual Offences Bill.

THE Criminal Law Amendment Bill, which in a recent session was before the House of Commons, has been reintroduced in the House of Lords. It deals with the criminal law concerning the age of consent and other matters. One of the clauses concerns sexual intercourse by a person suffering from venereal disease, and is in the following terms:—

(1) A person who is suffering from venereal disease in a communicable form shall not have sexual intercourse with any other person, or solicit or invite any other person to have sexual intercourse with him or her.

(2) If any person acts in contravention of this section, that person shall be liable on conviction on indictment to imprisonment with or without hard labour for a term not exceeding two years, or on summary conviction to imprisonment with or without hard labour for a term not exceeding six months: Provided that—(*a*) a person shall not be convicted under this section if that person proves that he or she had reasonable grounds to believe that he or she was free from venereal disease in a communicable form at the time the alleged offence was committed; and (*b*) no person shall be convicted of any offence under this section upon the evidence of one witness unless such witness be corroborated in some material particular by evidence implicating the accused.

(3) A person charged with an offence under this regulation shall if he so requires be remanded for a period (not less than a week) for the purpose of such medical examination as may be requisite for ascertaining whether he is suffering from such a disease as aforesaid. The defendant shall be informed of his right to be remanded as aforesaid, and that he may be examined by his own doctor or by the medical officer of the prison.

(4) An offence under this section shall be deemed to be an offence to which Section 29 of the Larceny Act, 1916 (which relates to the demanding of money, &c., with menaces), applies.

The Bill also deals with the question of indecent advertisements.

On Tuesday, May 7th, the second reading of the Bill was moved by Viscount SANDHURST, who explained its terms. It was read a second time.

A second reading was also given to the Sexual Offences Bill. It proposes to make further provision with respect to the punishment of sexual offences and for the treatment of venereal disease and the prevention of indecent advertisements and matters connected therewith.

It was afterwards resolved to send both Bills to a Joint Select Committee of both Houses of Parliament.

HOUSE OF COMMONS.

WEDNESDAY, MAY 1ST.

Dental Surgeons in the Army.

Answering Mr. PENNEFATHER, Mr. MACPHERSON (Under Secretary for War) said: The War Office has already taken steps to place the dental examination of the teeth of recruits and the dental care of serving soldiers on a satisfactory basis. The total number of dental surgeons now employed in the Army is 584: and 233 dental surgeons who were previously employed as combatants have received dental commissions. It is proposed to increase the number of dental surgeons holding commissions, but the actual number is not fixed.

Railway Fares of R.A.M.C. Officers.

Sir H. CRAIK asked the Financial Secretary to the War Office whether medical men who were called up to serve as officers in the R.A.M.C. were required to pay their own railway fares from their homes to London; and whether he was prepared to remedy the hardship thus caused to doctors resident in Scotland or at a distance from London.—Mr. FORSTER replied: R.A.M.C. officers do not necessarily join for duty in London on first appointment, but proceed from their homes to their stations direct. Free travelling for this journey is not admissible.

Wounds of Soldiers.

Mr. GILBERT asked the Under Secretary for War whether he had now completed his inquiries as to whether any of our wounded men in the recent German advance had suffered from any new kind of explosive shell or any new form of gas; and whether he could make any statement on the subject.—Mr. MACPHERSON said in reply: Reports have been obtained from various hospitals in the London district, and there does not appear to be any evidence which would lead the medical authorities to believe that any wounds to our soldiers have been caused by a new kind of explosive, chemical shell, or gas used by the enemy.

Venereal Disease in the Army.

Mr. KING asked the Under Secretary for War whether any authority existed in the Army Act or King's Regulations whereby officers or men were penalised who admitted that they had incurred, or on examination were found to have incurred, venereal disease; and, if so, what were the penalties which were now being imposed.—Mr. MACPHERSON answered: Officers admitted to hospitals with venereal disease are required to pay the full hospital stoppage—namely, 2*s.* 6*d.* a day, and forfeit their field allowance and lodging, fuel, and light allowances. Soldiers are required to pay hospital stoppages of 7*d.* a day, and forfeit proficiency pay, corps or engineer pay, and the increases of pay recently authorised. As laid down in Paragraph 462, King's Regulations, concealment of venereal disease will be dealt with under the Army Act, and is an offence punishable with two years' imprisonment with hard labour.

The Medical Examination of Recruits.

Mr. CATHCART WASON asked the Parliamentary Secretary to the Ministry of National Service whether he was aware that in the past military doctors had not paid the slightest attention to the opinions of civilian doctors and that, in consequence, many men utterly unfit had been called up for service at a useless cost to the country; and whether, under the more serious conditions now prevailing, he would see that the opinions of civilian doctors were reasonably considered.—Mr. BECK answered: I presume that the statement refers to the practice of the old recruiting boards. Under the present arrangements for the medical examination of recruits every effort is made, not only to obtain evidence of each man's medical history, but to weigh this evidence carefully before deciding on a man's grading.

Mr. ADAMSON asked whether medical grade No. 2 now included the old category B 2 as well as the categories B 1 and C 1.—Mr. BECK: The answer is in the negative. The classification by grades introduced last autumn superseded the former classification by categories. There is no precise parallel between the grades and categories. Men in Category B 2 are administratively regarded as in Grade 3 until they are re-examined and graded by a National Service Medical Board. Thereafter they are liable to the conditions affecting the grade in which they are placed. The standards of medical grading by National Service Medical Boards have not altered. The only variation is that a slightly lower standard of vision has been adopted in accordance with the views expressed by a committee of military and civil ophthalmic specialists.

Mr. T. E. HARVEY: Would it be possible to give the standard conditions adopted now?—Mr. BECK: Practically they have been published now, and I believe they are on sale.

THURSDAY, MAY 2ND.

Medical Students and Military Service.

Answering Mr. SNOWDEN, Mr. BECK (Parliamentary Secretary to the Ministry of National Service) said: The present position of medical students in relation to military service is determined by National Service Instruction 35 of 1918 and Army Council Instruction 153 of 1918. Under the former fit men who were at the date of the instruction (March 5th, 1918) full-time medical students at a recognised medical school, and who either have already passed the whole of the first professional examination in chemistry, physics, and biology (or botany and zoology) or who are certified as being able to pass the whole of that examination on or before July 31st, 1918, are exempted from military service under certain conditions: firstly, as to the efficient prosecution of their studies; and, secondly, as to training in an officers training corps. On completing their second examination such students, if physically fit, are required to serve as surgeon-probationers in the Navy. Students in Grade III., subject to similar provisions as to work and training, are not to be called up without reference to the Ministry of National Service as long as they remain full-time students. Under Army Council Instruction 153 of 1918 men serving with the colours who had immediately prior to enlistment been whole-time medical students at a recognised medical school for at least six months and had passed the whole of the First Professional Examination may on application be released from the colours in order to resume their medical studies. Medical students who do not fulfil these conditions of exemption are posted to the Army in the ordinary way and not necessarily to the R.A.M.C.

The Inquiry into Medical Service in France.

Major DAVID DAVIES asked the Under Secretary for War whether, in view of the increased demands upon the medical man-power of the country, he would take immediate steps to present to the House the report of the Committee of Inquiry into the Medical Service in France; and whether he could inform the House when a decision will be arrived at by the Army Council.—Mr. MACPHERSON replied: In the opinion of the recognised heads of the civil medical profession there is nothing in the report on which action is likely to be taken affecting the medical man-power of this country. As I have already stated, consideration of this report has to be suspended during the present emergency. It is not proposed to publish the report.

Command of Army Ambulances.

Mr. JOYNSON-HICKS asked the Under Secretary for War (1) whether he was aware that an officer of the Regular

Army was appointed to command a new Army ambulance in the 38th Division, First Army, although the name of an officer already serving in a field ambulance of the same (38th) division was submitted from the division to the corps and approved by the corps; and would he say why the officer recommended was not appointed; and (2) whether he was aware that three officers of the Special Reserve were appointed recently to be commanding officers of Territorial field ambulances in the 57th Division, First Army, and would he say why Territorial field officers were not appointed to command these Territorial field ambulances.—Mr. MACPHERSON answered: The appointment of officers to command units in France is entirely a matter for the Field Marshal commanding-in-chief, and nothing is known in the War Office of the particular appointments referred to.

Food Rations for Invalids.

Mr. PONSONBY asked the Parliamentary Secretary to the Ministry of Food whether, in view of the recent further reduction in the meat rations, the Food Controller would consider the claim to an extra allowance of butter or meat of persons suffering from wasting diseases and diseases of the digestive organs which could not be scheduled as either tuberculosis or diabetes.—Mr. CLYNES answered: Food Control Committees are being informed that they may forward, for the consideration of the medical advisers of the Ministry of Food, any exceptional cases of disease in which they are of opinion that the special allowance of butter or meat should be allowed.

Botulism.

Mr. GILBERT asked the Parliamentary Secretary to the Local Government Board whether his attention had been called to several deaths from a disease called botulism which were reputed to be caused by eating tinned foods; and whether, in view of the quantity of this class of food which was now consumed by the public, he proposed to issue any special orders or instructions to medical officers of health on the matter.—Mr. S. WALSH replied: There have been a few deaths from an obscure disease presenting nerve symptoms which resemble those of the very rare food disease hitherto unknown in this country called botulism. The disease is under investigation by my Department in collaboration with the Medical Research Committee. The inquiries which have been made up to the present have failed to associate the illness with the consumption of any particular article of food, and no special orders regarding food are at present contemplated.

Offences Against the Vaccination Acts.

Mr. SNOWDEN asked the Home Secretary whether he would state the number of persons imprisoned in default of payment of penalties for offences against the Vaccination Acts during each year since March 31st, 1907.—Sir G. CAVE replied: The figures are as follows:—For the year ending March 31st, 1908, 18; 1910, 5; 1911, 4; 1912, 1; 1913, 4; 1914, 1. No figures are available since March 31, 1914.

Public Health Administration.

Mr. HAYES FISHER (President of the Local Government Board) in making a statement on the work of the Local Government Board, in Committee of Supply on the Vote for that Department, referred to several questions connected with public health.

Housing.—On the question of housing he said that the whole problem very naturally occupied a large portion of the attention of the President of the Local Government Board. A circular had been sent out to the local authorities in July, 1917, asking what number of new working-class houses would be required now and after the war. The replies indicated the probable need for some 300,000, of which some 900 local authorities indicated their willingness to provide some 150,000, and they stated that something, but not much, must be expected from private enterprise. The circular of July, 1917, was followed up by a circular of March 18th, which was issued with the authority of the War Cabinet. It explained to local authorities what the State was prepared to do in the way of finance. The main terms offered by the State to local authorities were these. The local authority should select its land. It need not necessarily secure the land at the present moment. It could obtain an option to purchase over the land. It should then form an estimate of what the probable cost of erecting houses on that land would be and an estimate of what the probable rent would be which it might expect to derive from the houses over a course, say, of seven years. The Treasury, that was the Government, would then agree to find 75 per cent. of the estimated deficit on the annual balance sheet of these houses. At the end of seven years the houses would be valued, and so far as there was an excess—in all probability there would be an excess—of the debt remaining outstanding for loan purposes after the valuation the Government would find 75 per cent. of that excess, leaving 25 per cent. of the deficit on the estimated balance sheet for seven years and 25 per cent. of the deficit resulting from the valuation of the houses at the end of the seven years period to be borne by the ratepayers. It was indicated to the local authorities that the 25 per cent. would not in the main cost them more than a penny rate, but it was pointed out that 25 per cent. might in some cases cost more than a penny rate, and a further concession was then made by the Treasury that where it was, perhaps, an agricultural area, very heavily rated, or where there were special circumstances of poverty in connexion with that area, if the 25 per cent. amounted to more than the product of a penny rate, then the Local Government Board might, if it thought fit, increase the Exchequer contribution so as to reduce the charge on the local authority to the equivalent of a penny rate. These proposals were made with reference to new dwellings, but he hoped the work of remodelling dwellings and the work generally known as clearing slums would be actively renewed after the war was over and when money could be obtained for it.

Coördinating Health Agencies.—I pass from the question of housing to the kindred subject of health (said Mr. Hayes Fisher), although I think that the House will agree with me that housing is the most important branch of this whole subject. We are all aware that there has been for some time a movement for bringing all these health activities of the various departments under one department and one Minister. For myself, I am strongly in favour of that proposal so long as it is acknowledged that you cannot divorce health and health policy from the whole policy of housing and sanitation, and that you cannot deprive local elected bodies of the public health activities which are growing day by day under the pressure of public opinion. I freely acknowledge that when we come to address ourselves to this great question of public health activities, for which various State departments are responsible, it is not sufficient merely to amalgamate certain departments that now deal with various sides of the health question. We shall have to look to the local areas. We shall have to consider whether in some cases those local areas are not too small, and whether in some cases the functions ought not to be spread over larger areas and larger units instead of the present small areas and small units.

Evolution in Health Activities.—All these questions will have to be considered at the proper time, but while we are considering this future policy of public health as a matter really for which the Government must some day find time—it clearly cannot do so at the present critical time and under the present congested state of things—do not let it be supposed that there is any stagnation even at the present time in health activities either on the part of the local authorities or the Local Government Board. There is a progressive evolution going on in all health questions even during the troublous times through which the country is passing and with the depleted staffs which are left to deal with them. Witness all that has been done in connexion with maternity and child welfare, venereal disease, tuberculosis, the medical care of the poor, and the care of the blind. A few figures might be interesting to the House in connexion with maternity and infant welfare. Health visitors were first started in 1890. In 1914 there were only 600 health visitors, but in 1918 there are more than 2000 health visitors. The majority of them give the whole of their time to that work. Of course, many more will be needed when the war is over, and I am convinced that one of the best channels into which the many splendid women now doing such magnificent work in connexion with our soldiers and our sailors can flow when the war is over will be this channel of doing the same thing for the civil population as they have been doing for the military and naval population. Of maternity and infant welfare centres, the first of which was started in 1906, there are now more than 1100, rather more than half of which are conducted by local authorities and rather less than half by voluntary societies.

Maternity and Infant Welfare.—Then as to midwifery. I am sure that the House will agree with me that nothing is more important than to extend the midwifery service, but owing to many causes we are short of midwives in the country at the present time. For my own part, I think we can hardly expect largely to increase the number of midwives until we raise their status and raise the wretched salaries with which they have to support life at the present moment, notwithstanding the delicate and trying duties they have to perform. I should like to see this reform accomplished, and the object we have in our mind is to have midwifery services everywhere. I would like to see the time when a competent midwife is available for every woman who needs her help, for one of the great things we are all thinking about is the reconstruction period after the war, when we shall have to replace the terrible losses we are suffering in the battlefield. But the result of our work under war conditions is shown by the fact that in 1910 midwives attended half the births of the country, while now in 1918 midwives attend three-quarters of the births of the country. The work of the whole of our maternity services is shown in these figures: that whereas the death-rate among

infants was 150 per 1000 up to 1900, the death-rate among infants is now 100 per 1000, which is a distinct improvement. There are other important figures which I would like to give to the House relating to midwives and births, despite the difficulty of securing an adequate number of midwives. In the ten years from 1897 to 1906 one mother died in childbirth for every 228 births. In the last ten years one mother has died in childbirth for every 260 births, so there is at least a distinct improvement in the figures. I have been very anxious since I have been President of the Local Government Board to extend our powers as regards the whole of this work, which is annually growing, as will be seen by the figures of expenditure. The expenditure incurred on this work in the last three years by local authorities has been £96,000, £169,000, and £279,000 respectively, while the expenditure of voluntary agencies during the last three years has been £40,000, £50,000, and £70,000 respectively. Those are approximate figures. I should say this does not represent the full value of the money spent as compared with normal conditions, but what is the exact proportion of loss that we have had to suffer owing to the fall in the value of the sovereign is a matter for careful inquiry. But the Treasury has extended quite lately the objects on which the grant can be paid, and it is now available for lying-in homes, creches, day nurseries, and the provision of food and milk for expectant and nursing mothers and young children, as well as convalescent homes for nursing mothers and young children and other objects. The money is available for all these things, now chiefly carried out by voluntary associations because unfortunately the local authorities have not the legal power to do many things they ought and want to do, and the Government cannot find time for certain little Bills to be introduced in this House. I know we have the Maternity and Infant Welfare Bill, giving the local authorities powers for spending money on the lying-in homes, creches, &c. I am well aware that there is an expectation that there should be a still larger Bill dealing with the Ministry of Health, but if we have not time even for small measures it would seem that there may not be time for larger measures.

Treatment of Venereal Disease.—If I may take another subject very shortly I would like to deal with venereal disease. The Committee will recollect that under the Regulations of 1916 all county councils and county borough councils were required to submit free schemes for diagnosis and treatment of venereal disease. They responded admirably to that requirement, notwithstanding the extraordinary difficulty in which the hospitals have been placed at the present time. Schemes submitted by 121 local authorities out of 145 have been approved by the Board, covering a population of 32,500,000, and 181 treatment centres are already at work serving a population which amounts approximately to 30,000,000. In London treatment centres were opened on Jan. 1st, 1917, and there were during the first year 16,020 cases treated at those centres. Altogether there is evidence that those treatment centres are being resorted to as it is the desire they should be resorted to, and that treatment of the most modern kind is being offered and is being very gratefully accepted by those who unfortunately had contracted this disease. It is too soon to ask whether we are satisfied with the results, and I have alluded to the extraordinary difficulties in which the hospitals are placed owing to the shortage of doctors, while in addition there is a shortage of salvarsan and things of that kind. But I say that the general way in which response has been made by the local authorities to these regulations is most encouraging, and I believe the House is pursuing the right policy in offering men and women this sure form of treatment, administered in every way with the utmost confidential securities, so that people have no excuse in not going to get themselves cured, or for going to those who do not cure but to whom they are often driven by fear of publicity. The grant paid by the Board during the financial year 1917-18 amounted to £84,483, and for the current year it is expected to amount to £250,000. That represents, of course, only 75 per cent. of the expenditure, as the State provides that percentage of the expenditure to which the local authorities commit themselves.

Treatment of the Blind.—The right honourable gentleman dealt also with the report of the Committee on the Condition and Welfare of the Blind. He proceeded: Now for the first time the State is going to do for the blind what it should have done many years ago. It is going to make special provision for them. It is going to see that there is some supervision of their general education and general maintenance. I set up a special Departmental Committee in the Local Government Board and the Parliamentary Secretary to the Board (Mr. S. Walsh) undertook the chairmanship of it. That Committee has already done some most useful and practical work. The first thing was to establish a complete register of all the blind in the country. Of course we cannot do much as regards workshops, which is the crux of the whole position, during the war, but we can at least see that under the new Education Bill everything possible is done for the blind in regard to education. I want this country to be the country to which everybody will come in order to study the best methods of treating the blind. Of course, philanthropic effort, much as it has done and is continuing to do, cannot do everything, and I am quite certain that what is wanted is supervision over all the great agencies that exist for the blind. Coöperation also is needed. It is necessary to fill up the gaps. We want to establish workshops for the blind, to help them to sell their goods at a profit in what, I admit, is a limited market, and for those who cannot work, even when you have trained them, it is necessary to provide them with an adequate pension. That is all in process of being done.

Housing and Local Authorities.

Mr. S. WALSH (Parliamentary Secretary to the Local Government Board), in the course of his reply to points raised in debate, said that the question was put as to what would be done with recalcitrant local authorities in the matter of housing. At present there was no special power, but the Local Government Board was in hopes that very shortly a Bill would be placed on the Statute Book which would give county councils power to act in default of local authorities that were neglectful of their obligations in this particular matter.

TUESDAY, MAY 7TH.

Mental Cases in the Army.

Sir MONTAGUE BARLOW asked the Parliamentary Secretary to the Ministry of Pensions whether he would state the number of men who had been discharged from the Navy and the Army on account of mental affliction who had received treatment as service patients in county or borough lunatic asylums; and how many of these had now been allowed to leave these asylums and return home.—Sir A. GRIFFITH-BOSCAWEN replied: About 1900 men have received treatment as service patients, and of these about 50 have been discharged.

THE SERVICES.

ROYAL NAVAL MEDICAL SERVICE.

To be temporary Surgeons: J. C. Hendrie, H. V. Edwards, G. E. Mullins.

ARMY MEDICAL SERVICE.

Colonels to be Major-Generals: Temp. Major-Gen. O. R. A. Jullan, vice Major-Gen. F. J. Jencken, ret.; S. Macdonald, vice Major-Gen. H. G. Hathaway, ret.; Temp. Major-Gen. M. P. C. Holt, K.C.M.G., vice Major-Gen. Sir F. H. Treherne.

Lieut.-Col. (temp. Col.) J. D. Alexander, from R.A.M.C., to be Colonel.

ROYAL ARMY MEDICAL CORPS.

Capt. C. W. Bowle to be acting Lieutenant-Colonel whilst in command of a Medical unit.

Bt. Col. H. A. Haynes is placed on retired pay.

To be acting Majors: Capts. R. A. Flood, J. Rowe, N. T. Whitehead; Temp. Capts. H. A. Lake, T. B. Batchelor, H. Moore, A. W. Rattrie, H. B. German, F. C. Lees, A. Richmond, A. F. Mavety, C. B. Davies, F. J. O. King, D. M. Morison, G. T. Baker, F. T. Fahy, A. R. Finn, W. A. Hislop, A. P. Fry, C. A. Boyd, J. R. P. Allin, V. M. Rich, R. B. Rutherford, W. C. Douglass, W. F. Morgan, W. S. Danks, J. Gibson, V. L. Connolly, J. B. Lowe, J. B. Davies, W. T. Brown, G. D. R. Carr, J. F. Robertson, A. S. K. Anderson, H. Young, H. H. Sampson, J. Anderson, S. J. Rowntree, W. Rankin, F. B. Manser, J. D. Hart, A. Mearns, H. W. Batchelor, B. H. Barton, H. H. Warren, H. R. Grellet, H. M. Vickers, G. Buchanan, W. J. A. B. Wishart, D. S. Brough, F. H. McCaughey, R. C. Irvine, R. M. Greig, S. Cross, P. Carney, A. Sunderland, F. de S. McMenamin, J. A. Doull, R. Svensson, H. W. Turner, M. A. Power, J. B. Haycraft, J. S. Arkle, R. C. Alexander, A. T. Edwards, H. B. Day, A. W. H. Donaldson, J. B. Cook, R. Charles, T. C. Ritchie, W. G. Mumford, A. G. Hamilton, F. G. Bell, R. T. Worthington, T. I. Bennett, H. W. Scawin, S. G. Luker; Lieuts. (temp. Capts.) R. J. Clausen, G. A. E. Argo, H. A. Harbinson, H. A. Rowell; Temp. Lieut. H. Goodman.

Temp. Capt. C. Gibson (Canadian A.M.C.) to be acting Major while specially employed.

Temp. Capt. C. R. Macleod relinquishes the acting rank of Major on resigning.

N.W. Rawlings, late temp. Captain, is granted the hon. rank of Captain.

Temporary Lieutenants to be temporary Captains: A. C. Steele (Canadian Army Dental Corps), H. Parsons, R. G. Struthers, W. P. S. Jonnson, R. H. Adams, A. R. Berrie, J. E. Erskine-Collins, F. W. Browne, E. W. Sheaf, T. Hamilton, A. G. W. Owen, H. V. Deakin, A. F. Morcom, J. F. Mackay, S. Gardner, E. L. Councell, M. L. Farmer, A. Mackintosh, W. H. Howat, J. R. Stott, J. F. Sheppard, R. S. Stevenson, A. H. Sinclair, F. J. Trimmer, G. F. Woodroffe, P. E. H. Patey, B. McB. Richardson, R. M. Bradley, T. J. Killard-Leavey, H. M. MacL. Mackenzie, G. H. G. Davie, A. H. Richardson, C. H. Haddow, G. N. Montgomery, E. Sakaschansky, S. H. Good, J. B. Mackenzie, F. W. Hayes, H. A. Easton, S. H. Kingston, J. S. Payne, L. R. King, A. J. O'Leary, S. Wigglesworth, C. G. Pugh, V. C. Pennell, H. A. Richards, G. Maxted, F. I. Dawson, R. H. G. Oulton, A. C. Campbell, F. C. Trapnell, W. Waugh, J. Buchanan, H. R. Crisp, R. S. Topham, J. W. Power, H. D. Ledward, W. St. C. McClure, G. M. Cameron, B. W. Atkinson, G. W. Clark, R. V. Howell, J. B. McMorland, C. K. Attlee, J. C. Nixon, W. S. Stevenson, G. H. Urquhart, H. N. Webber, R. G. Sterling, P. Allan, G. Taylor, O. F. D. Airth, W. J. Purdy, P. Cheal, H. D. McCall, W. Templeton, C. C. Kennedy, J. D. Lyle, A. B. Jones, A. R. Leggate, J. Glaister, W. R. Reels, T. Howell, S. Upton, W. H. Bennett, P. J. Montgomery, A. V. Bovall, G. B. Mesenger, G. T. Bogle, J. S. Clark, L. C. Rivett, F. J. Waldmeirer, J. M. Shaw, R. Appleton, S. W. Milner, W. L. G. Anderson, W. G. Attenborough, A. Graham-Stewart, E. A. Price, N. Clegg, C. P. A. Stranaghan, R. J. Croxford, H. S. Thomas, L. S. Davison,

T. B. Johnston, A. M. Caverhill, T. B. Davies, J. B. McDougall, D. S. Clarke, J. B. Ball, N. S. Lucas, H. E. Graham, H. Bardsley, W. L. M. Day, D. W. Anderson, E. H. R. Altounyan, A. C. Meek, W. H. Johnston, A. N. Collier, G. H. F. Groves, G. M. Simpson, E. J. Stuckey, C. H. Booth, R. J. Duthie, A. W. Gill, J. A. Bateman, C. O. Bodman, A. Shelley, J. McCartney, F. D. Simpson, L. D. H. Baugh, P. C. Bushnell, H. B. Pare, H. G. White, L. A. H. Bulkeley, J. Goff, E. D. Keane, H. S. A. Hogg, G. R. Dobrashian, F. C. H. Bennett, R. W. Pearson, J. E. English, A. C. Hallowes, H. G. Steel, J. P. McVey, W. B. Jack, R. J. Helsby, J. J. Armistead, R. E. Whitting, E. P. Carmody, L. Gray, T. Mohan, C. C. Chance, J. W. Fox, W. J. Middleton.

J. P. Griffin to be temporary honorary Lieutenant whilst serving with British Red Cross Hospital, Netley.

Officers relinquishing their commissions:—Temp. Capts.: G. C. Anglin (on account of ill-health), J. Ross, F. G. Thomson, H. N. Rankin, D. Wilson, J. S. Ross, M. Ramsay, H. G. Brown, J. Marnion, Ll. McI. Weeks, J. H. Waterhouse, E. S. Gooddy, B. Wallace, M. Moran, W. O. Welply, H. Hannigan, G. N. Lorimer, H. M. Harrison, J. S. Annandale, A. Hendry, J. M. O'Reilly, T. J. Buckley, J. K. Watson, G. F. Forde, N. W. Walmesley, V. J. McAllister, J. H. Wilkinson, R. Slaney, A. J. Smith, C. McShane, F. L. Wood (on account of ill-health, and is granted the honorary rank of Captain), R. P. Smith, W. G. Weston (on account of ill-health contracted on active service, and is granted the honorary rank of Captain), R. C. Brown, N. G. Harry, T. MacHardy, E. D. Richardson (on account of ill-health, and is granted the honorary rank of Captain), R. McL. Veitch (on appointment under the Ministry of National Service), H. McLean, J. F. Sadleir, W. M. McLaren, J. A. Hutchinson, A. D. Bigland (on account of ill-health contracted on active service, and is granted the honorary rank of Captain), A. Stevenson (on account of ill-health, and is granted the honorary rank of Captain). Temp. Lieuts.: R. T. Edwards (on account of ill-health, and is granted the honorary rank of Lieutenant), T. E. A. Stowell, D. Lynch, M. A. Teale, A. Bevan, A. W. G. Clark, A. W. M. Sutherland, L. J. Spence, F. W. Hartley, F. J. Lawson, R. J. Maglone, A. A. Wilkinson, S. M. Wilcox, C. F. Hardie, A. Densham. Temp. Hon. Lieut.: L. B. Farrior.

SPECIAL RESERVE OF OFFICERS.

Capt. J. R. R. Trist, M.C., to be acting Lieutenant-Colonel whilst in command of a Medical Unit.

Captains to be acting Majors: J. Kennedy, H. G. Crawford, H. S. Milne, I. D. Evans, C. N. Gover, S. R. Armstrong, G. T. Mullally, W. McCombie, W. Murdoch, W. McK. H. McCullagh, C. J. B. Way, R. H. Leigh, C. M. Page, P. B. Corbett, J. Inkster, T. W. Clarke. (Bt. Maj.) R. C. Ozanne, B. Goldsmith, E. M. Cowell, W. McN. Walker, J. C. Young.

Capt. F. O. L. Moore relinquishes his commission on account of ill-health and is granted the honorary rank of Captain.

Capt. G. H. C. Mold relinquishes the acting rank of Major on reposting.

H. M. Savery, from University of London Contingent, O.T.C., to be Lieutenant.

TERRITORIAL FORCE.

Lieut.-Col. J. Oldfield relinquishes his commission on account of ill-health (granted permission to retain his rank and wear uniform).

Lt.-Col. (Bt. Col.) F. H. Westmacott, Major G. R. Murray, and Capts. E. Moir and G. L. Chiene are seconded for duty with a General Hospital.

Capt. I. G. Back is seconded.

Capt. A. B. Sloan to be Major.

Capt. W. P. T. Atkinson relinquishes his commission on account of ill-health and is granted the honorary rank of Captain.

Captains to be acting Majors whilst specially employed: G. W. Deeping, J. Derham-Reid, R. Ellis, H. E. Fox, G. Stevenson, W. P. Ferguson, R. C. S. Smith, W. J. Hirst, W. V. Wood, P. H. Green, C. H. Crawshaw, W. Briggs, C. B. Baxter, T. P. Caverhill, D. E. Finlay.

Capt. E. F. W. Buckell (late R.A.M.C.) to be Medical Officer and temporary Captain, 1st Battalion, Isle of Wight Volunteer Regiment.

Medical Officer and temp. Lieut. A. A. Angelis to be temporary Captain, 1/11th Battalion County of London Volunteer Regiment.

URBAN VITAL STATISTICS.

(Week ended May 4th, 1918.)

English and Welsh Towns.—In the 96 English and Welsh towns, with an aggregate civil population estimated at 16,500,000 persons, the annual rate of mortality was 14·7, against 15·4 and 15·9 per 1000 in the two preceding weeks. In London, with a population exceeding 4,000,000 persons, the death-rate was 14·9, or 2·6 per 1000 below that recorded in the previous week; among the remaining towns the rates ranged from 4·7 in Eastbourne, 5·1 in Swindon, and 5·6 in East Ham, to 21·1 in Bradford, 21·8 in Wakefield, and 25·0 in Barnsley. The principal epidemic diseases caused 501 deaths, which corresponded to an annual rate of 1·6 per 1000, and included 210 from measles, 178 from whooping-cough, 52 from diphtheria, 44 from infantile diarrhœa, 12 from scarlet fever, and 5 from enteric fever. Measles caused a death-rate of 2·6 in Plymouth, 2·8 in Hull, 3·1 in Rochdale, 4·4 in Wakefield, and 5·4 in Barnsley; and whooping-cough of 1·6 in Sheffield and in Rotherham, 1·7 in West Hartlepool, 1·8 in Walsall, and 4·1 in Aberdare. The 875 cases of scarlet fever and 1377 of diphtheria under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital were 35 below and 9 above the respective numbers remaining at the end of the previous week; there were also 13 cases of small-pox under treatment, including 3 admitted during the week. Of the total deaths in the 96 towns 137 resulted from violence. The causes of 38 deaths were uncertified, of which 10 were registered in Liverpool, 7 in Birmingham, and 2 each in Halifax and Sunderland, but not one in London.

Scotch Towns.—In the 16 largest Scotch towns, with an aggregate population estimated at nearly 2,500,000 persons, the annual rate of mortality was 14·4, against 13·7 and 15·3 per 1000 in the two preceding weeks. The 320 deaths in Glasgow were equal to an annual rate of 15·0 per 1000, and included 22 from measles, 11 from whooping-cough, 5 from infantile diarrhœa, 3 from diphtheria, and 1 from scarlet fever. The 92 deaths in Edinburgh corresponded to a rate of 14·4 per 1000, and included a fatal case of diphtheria.

Irish Towns.—The 142 deaths in Dublin were equal to an annual rate of 18·6, or 2·2 per 1000 below that recorded in the previous week, and included 6 each from measles and whooping-cough and 4 from infantile diarrhœa. The 174 deaths in Belfast corresponded to a rate of 23·1 per 1000, and included 23 from whooping-cough, 6 from measles, and 1 each from enteric fever, scarlet fever, and infantile diarrhœa.

Appointments.

Successful applicants for vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

AGNEW, H., L.S.A., M.R.C.S. Eng., has been appointed Assistant School Medical Officer for the Sawbridgeworth District.

MCCLYMONT, J., M.D. Edin., Assistant School Medical Officer for the Cheshunt District.

MESSITER, C. C., M.R.C.S., L.R.C.P. Lond., Certifying Surgeon under the Factory and Workshop Acts for the Dudley District of the county of Worcester.

THORNLEY, R. L., M.D. Lond., County Medical Officer of Health for the East Riding of Yorkshire.

YOUNG, R. A., M.D. Lond., F.R.C.P. Lond., Physician to the Middlesex Hospital.

ST. THOMAS'S HOSPITAL.—Casualty Officers and Resident Anæsthetists: BONNETT, E. J. S., M.R.C.S., L.R.C.P. Lond.; COBB, C. E., M.R.C.S., L.R.C.P. Lond.; GREENSTREET, N. B.DE. M., M.R.C.S., L.R.C.P. Lond.; VERNON, C. H., M.R.C.S., L.R.C.P. Lond. Resident House Physicians: PATTERSON, T.; SPOOR, A. T. Resident House Surgeons: ALTON, F. C., M.R.C.S., L.R.C.P. Lond.; HOBSON, F. G.; SHOWELL ROGERS, E. N. House Surgeon: DILWORTH, T. M., M.B., B.Ch., B.A.O. N.U.I. Obstetric House Physician: RUSSELL, H. B., M.R.C.S., L.R.C.P. Lond. Clinical Assistants: WALKER, R. A. (Throat); MARRINER, H. I. (Ear); LEVICK, G. MURRAY, M.R.C.S., L.R.C.P. Lond. (Children's Surgical); HARGREAVES, A. R., M.R.C.S., L.R.C.P. Lond., D.T.M. (Electrical and X ray).

Vacancies.

For further information refer to the advertisement columns.

Birmingham General Dispensary.—Res. M.O. £340.
Bedford County Hospital.—H.S. £174 10s.
Bootle Borough Hospital.—Junior H.S. £170.
Bristol Royal Infirmary.—H.P. and H.S. £120.
Bury Infirmary.—Senior H.S. £300.
Carlisle, Cumberland Infirmary.—Female H.S. and H.P.
Chester Royal Infirmary.—H.S. £150.
Dudley, Guest Hospital.—Sen. Res. M.O. £150. Also Asst. H.S. £120.
Durham County Council.—*Maternity and Child Welfare.*—Female M.O. £400.
Elizabeth Garrett Anderson Hospital (New Hospital for Women).—Female H.P., Two H.S., and Obst. Asst. £30. Also Clin. Assts.
Great Northern Central Hospital, Holloway.—H.S. £130.
Hospital for Consumption, Brompton.—H.P. for 6 ms. 30 gs.
Hospital for Diseases of the Throat, Golden-square, W.—H.S.
Huddersfield Royal Infirmary.—Res. H.S. £250.
Lincoln General Dispensary.—Res. M.O. £350.
Manchester Children's Hospital, Pendlebury.—Res. M.O. £200.
Manchester Children's Hospital, Gartside-street.—M.O. £20.
Manchester Corporation.—Temp. Asst. Tuber. Officer. £450.
Ministry of Pensions.—Medical Referees.
Norwich, Norfolk and Norwich Hospital.—H.S. £400.
Nottingham General Hospital.—Female Casualty H.S. £250.
Queen Mary's Hospital for the East End.—H.S.
Reading, Royal Berkshire Hospital.—H.S. £250.
Rochdale Infirmary and Dispensary.—Senior H.S. £400.
Roll of Honour Hospital for Children, Harrow-road, W.—Female Anæsthetist. £20; L.C.C. fees £100.
Rotherham Hospital.—Junior H.S. £150.
Royal College of Surgeons of England.—Election to Court of Examiners. Also Professors and Lecturers.
St. Helens Corporation Sanatorium.—Temp. Res. M.O. £300.
Salisbury General Infirmary.—H.S. £200.
Sheffield, Children's Hospital.—H.S. £160.
Sheffield Royal Infirmary.—H.S. £120.
Stockport Union, Stepping Hill Military Hospital.—Two Res. Asst. M.O. £300.
Swindon, Borough of.—Female Asst. M.O.H. £350.
West Ham Union Sick Home, Stratford, E.—Temp. Res. Asst. M.O. £6 6s. per week.
Westminster Hospital, S.W.—Asst. Physician.
Winchester, Royal Hampshire County Hospital.—Senior Res. M.O. £300.
Woolwich Metropolitan Borough.—Female Asst. M.O.H. £500.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of a vacancy for a Certifying Surgeon under the Factory and Workshop Acts at Newbury.

Births, Marriages, and Deaths

BIRTHS.

BOND.—On March 25th, at Liphook, Hants, the wife of C. Shaw Bond, M.B., a son.

GARNETT.—On May 5th, at Crooms Hill, Greenwich, the wife of Graham H. Garnett, M.D., of a daughter.

JAMES.—On May 2nd, at Hungerford, Berks, the wife of R. Blake James, M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.

MANSFIELD.—On April 26th, at "Helmsdale," Chalmers-street, Edinburgh, the wife of H. Y. Mansfield, M.D., Captain, R.A.M.C., of a daughter.

THATCHER.—On May 5th, at Hawarden, near Chester, the wife of Lewis Thatcher, M.D., F.R.C.P. Edin., Captain R.A.M.C., of a son.

MARRIAGES.

COLLINGWOOD ANDREWS—ROWELL.—On May 4th, at All Souls Church, Hampstead, Edward Collingwood Andrews, M.A., M.D., B.C., B.Sc., to Alison, daughter of W. Rowell, C.B., and Mrs. Rowell, of Fairhazel-gardens, South Hampstead.

GALBRAITH—ANDERSON.—On April 30th, at St. Silas Episcopal Church, Glasgow, Captain Walter Weir Galbraith, R.A.M.C., to Lucy Evelyn, daughter of Mr. A. P. Anderson, J.P., and Mrs. Anderson, Red Hall, Kelvinside, Glasgow.

KILPATRICK—JOHNSON.—On April 30th, at St. Michael's Church, East Teignmouth, Captain D. Ross Kilpatrick, M.D., R.A.M.C., to Dédé, only daughter of Mr. G. H. Johnson, The Crescent, Teignmouth.

DEATHS.

BLADES.—On April 22nd, at The Beeches, Romiley, Cheshire, T. P. Blades, L.R.C.S.

COUPER.—On April 30th, at Falmouth, John Couper, M.D., F.R.C.S., aged 82.

DANIELL.—On April 29th, at Banbury, Charles Henry Daniell, M.R.C.S., L.S.A., aged 60.

MASSY-MILES.—On April 26th, Captain Harry Godfrey Massy-Miles, R.A.M.C., aged 32.

MCSHEEHY.—On May 1st, at Donoman, Wimbledon, Surgeon-Major Edward Louis McSheehy, J.P., M.D., F.R.C.S.I. (late 5th Dragoon Guards), in his 85th year.

ROBINSON.—On April 26th, killed in action, Captain Henry Ellis Robinson, R.A.M.C., attached West Yorkshire Regiment, aged 31.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

EDITORIAL NOTICES.

In consequence of the pressure on our space and the shortage of paper, the Editor may be compelled to abbreviate communications, as an alternative to their rejection, when time does not allow them to be reconsidered by their authors.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

We cannot undertake to return MSS. not used.

Offices: 423, STRAND, LONDON, W.C. 2.

Communications, Letters, &c., to the Editor have been received from—

A.—Dr. H. G. Adamson, Lond.; Auxiliary Royal Army Medical Corps Funds, Lond., Hon. Sec. of; Dr. J. W. Ayres, Liverpool; Mr. J. F. Ashby, Surbiton.

B.—Dr. F. E. Batten, Lond.; Prof. O. C. Bradley, Edinburgh; Dr. G. S. Buchanan, Lond.; Surg.-Gen. Sir David Bruce, K.C.B.

C.—Dr. A. Cox, Lond.; Miss D. Cross, Newcastle-on-Tyne; Dr. W. Carey, Lond.; Dr. F. G. Crookshank, Lond.; Mrs. C. M. Crole, Cambridge; Mr T. Cowperthwaite, Lond.; Capt. A. Campbell, R.A.M.C.(T.); College of Ambulance, Lond.

D.—Staff Surg. S. F. Dudley, R.N.

E.—Surg.-Gen. G. J. H. Evatt, C.B.; Dr. H. A. Ellis, Middlesbrough; Dr. H. Edmondson, Burnley; Express Dairy Co., Lond., Sec. of; Dr. H. Elliot-Blake.

F.—Surg. G. M. Findlay, R.N.

G.—Mrs. A. L. Gardner, Liss; Mr. O. T. Griffiths, Lond.; Dr. L. G. Glover, Lond.; Capt. H. Goodale, R.A.M.C.; Capt. J. Geoghegan, R.A.M.C.

H.—Capt. H. T. H. Butt, R.A.M.C.; Capt. C. T. W. Hirsch, R.A.M.C.; Lt.-Col. L. W. Harrison, D.S.O., R.A.M.C.; Miss I. M. Harmer, Lond.; Dr. J. B. Hurry, Reading; Messrs. James L. Hatrick and Co., Lond.

I.—India Office, Lond.; Illuminating Engineering Society, Lond.

J.—Dr. G. P. James, Penarth; *Journal of the American Medical Association*, Chicago; Dr. Ada Jackson, Hull.

K.—Dr. J. Kirk, Edinburgh; Prof. H. Kenwood, C.M.G., Lond.; Dr. T. N. Kelynack, Lond.

L.—Mr. A. Lovell, Lond.; Leicester Public Medical Services, Chairman of.

M.—Messrs. Mayer and Meltzer, Lond.; Dr. H. C. Miller, Lond.; Mr. G. Mayall, Bolton; Medical Society of London, President and Council of; Capt. R. Massie, R.A.M.C.; Mexican News Bureau, Washington; Capt. J. Miller, R.A.M.C.(T.); Mr. J. Y. W. MacAlister, Lond.; Mr. B. E. Matthews, Lond.

N.—National Baby Week Council; National Association for the Prevention of Infant Mortality, Lond.; National Farmers' Union, Wellingborough, President of.

P.—Capt. H. M. Perry, R.A.M.C.; Dr. E. P. Poulton, Woldingham; Miss K. Pilkington, Lond.; Mr. C. J. Powell, Dublin; Dr. F. C. Poynder, East Grinstead.

Q.—Dr. M. Quackenbos, Taunton.

R.—Royal Army Medical Corps Fund, Sec. of; Dr. H. Rahmet Bey, Cairo; Royal Institution, Lond.; Royal Institute of Public Health, Lond., Sec. of.

S.—*Stockport Advertiser*, Stockport; Société de Chimie Industrielle, Paris, Sec.-General of; Société de Biologie, Paris; Stowmarket Urban District Council, Deputy Clerk of; Society of Public Analysts, Lond., Joint Hon. Sec. of.

T.—Col. A. H. Tubby, C.M.G., C.B.

W.—Mr. C. M. Weeks, Manchester; Mr. W. Woodbridge, Norwich; Col. Sir Almroth Wright, A.M.S.; Dr. C. H. Whiteford, Plymouth; Mrs. M. B. Wilson, Petworth; Mr. C. L. H. Wallace, Lond.; Mr. C. E. West, Lond.; Dr. F. P. Weber, Lond.

The following journals, magazines, &c., have been received:—American Journal of Orthopedic Surgery, Annales de l'Institut Pasteur, Quarterly Journal of Microscopical Science, Ambulance de "L'Ocean," American Medicine, British Dental Journal, St. Bartholomew's Hospital Journal, British Journal of Dental Science.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY, Burlington House, London, W.
THURSDAY, May 16th.—Papers:—Mr. J. C. M. Garnett: On General Factors in Mental Measurements (communicated by Prof. A. N. Whitehead).—Mr. C. M. Williams: On the Absorption of X Rays in Copper and Aluminium (communicated by Prof. E. H. Griffiths).—Dr. T. R. Merton: On the Electrical Resolution and Broadening of Helium Lines (communicated by Prof. A. Fowler).

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

Tuesday, May 14th.

GENERAL MEETING OF FELLOWS, at 5 P.M.
Ballot for Election to the Fellowship. (Names already circulated.)

MEETINGS OF SECTIONS.

Wednesday, May 15th.

HISTORY OF MEDICINE (Hon. Secretaries—J. D. Rolleston, Charles Singer): at 5 P.M.
Annual General Meeting.—Election of Officers and Council for 1918-1919.
Papers:
Sir William Osler: Presentation of Morton's Original Anæsthesia Papers to the Library, with Remarks.
Dr. C. G. Cumston: A Note on St. Cosmas and St. Damian, the Patron Saints of the Confraternity of the Surgeons of France.
Dr. Charles Singer: (1) The Lorica of Gildas the Briton, the Earliest Western Anatomical Text; (2) The Date and Authenticity of the Work on Bloodletting attributed to the Venerable Bede; (3) Dr. Thomas Winston: an Elder Contemporary of Harvey on the Circulation of the Blood.
Exhibition of Books, Pictures, &c. (at 4.30 P.M.).

Thursday, May 16th.

DERMATOLOGY (Hon. Secretaries—J. E. R. McDonagh, H. MacCormac; Hon. Acting Secretary—S. E. Dore): at 5 P.M.
Annual General Meeting.—Election of Officers and Council for 1918-1919.
Cases will be shown at 4.30 P.M.

Friday, May 17th.

ELECTRO-THERAPEUTICS (Hon. Secretaries—E. P. Cumberbatch, R. Knox): at 8.30 P.M.
Annual General Meeting.—Election of Officers and Council for 1918-1919.
Papers:
Mr. E. M. Corner: The Nature of the Scar Tissue in War Wounds.
Mr. Howard C. Head: Description of a Mobile X Ray Outfit (illustrated).
Members of the CLINICAL Section and of the Section of SURGERY are specially invited to attend.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 11, Chandos-street, Cavendish-square, W.
FRIDAY, May 17th.—5.30 P.M., Paper:—Major W. Byam, R.A.M.C.: Trench Fever.

MEDICAL SOCIETY OF LONDON, 11, Chandos-st., Cavendish-sq., W.
MONDAY, May 13th.—8 P.M., Annual Meeting. Election of Officers and Council for 1918-19 Session. 8.30 P.M., Annual Oration:—Dr. T. B. Hyslop: Degeneration—the Medico-Psychological Aspects of Modern Art, Music, Literature, Science, and Religion.

ILLUMINATING ENGINEERING SOCIETY, House of the Royal Society of Arts, John-street, Adelphi, W.C.
TUESDAY, May 14th.—6.15 P.M., Members' Formal Business. 6.30 P.M., Discussion on the Lighting, Heating, and Power Order (1918), and the Best Methods of Making Economies.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.
Clinics each week-day at 2 P.M., Wednesday, Friday, and Saturday also at 10 A.M.
(Details of the Post-Graduate Course were given in the issue of April 27th.)

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.
Out-patients each day at 2.30 P.M.
(Details of the Post Graduate Course were given in the issue of April 6th.)

THE THROAT HOSPITAL, Golden-square, W.
MONDAY, May 13th.—5.15 P.M., Special Demonstration of Selected Cases.
THURSDAY.—5.15 P.M., Clinical Lecture.

ROYAL INSTITUTION OF GREAT BRITAIN, Albemarle-street, Piccadilly, W.
TUESDAY, May 14th.—3 P.M., Lecture:—Prof. A. Keith: Field-Anthropologists. (Lecture IV.)

ROYAL INSTITUTE OF PUBLIC HEALTH, 37, Russell-square, W.C.
Course of Lectures and Discussions on Public Health Problems under War and After-war Conditions:—
WEDNESDAY, May 15th.—4 P.M., Lecture III.:—Prof. W. M. Bayliss: Accessory Components of Food.

COLLEGE OF AMBULANCE, 3, Vere-street, Cavendish-square, W.
Course of Special Lectures and Demonstrations on Ambulance Work and First Aid (illustrated as far as may be possible and followed by a Discussion).
THURSDAY, May 16th.—4.30 P.M., Lecture I.:—Col. Sir James Cantlie, K.B.E.: Ambulance and First-Aid for the Agricultural Worker.

Notes, Short Comments, and Answers to Correspondents.

A MEDICAL LIBRARY IN WAR-TIME.

THE annual report of the Library Committee of the College of Physicians, Philadelphia for the year 1917 reflects the difficulties of a medical library during a great war. The library, which now contains 119,000 volumes and 93,000 pamphlets, has naturally been less used than in previous years.

A gradual decrease in the visitors and books consulted has been reported since the effects of the war in Europe became evident, but with the entry of the United States in the war, April 6th, 1917, the decrease in the use of the library has been marked. Nearly one-half of the Fellowship of the College is under Government Service and a large proportion of the usual workers in the Library, not Fellows, have also volunteered their service.

The library has suffered most in respect of foreign medical literature.

The conditions covering the receipt of foreign medical literature have been more restricted than during the previous year, particularly in the field of periodical publications. Numbers are lost in transit, and this loss is not known until the following number arrives. The end of this war will find many broken links that will have to be gathered together to form again the unbroken chain in their files of serial publications. The library that can afford to send a special representative abroad to collect from its many sources the material issued in the various countries with which communication has been more or less interfered with will have a great advantage.

In spite of this the number of new publications received during the year shows an increase of 30 on the previous year, the actual numbers for the years 1915–17 being:—

	1917.	1916.	1915.
United States	456	425	283
Great Britain	121	161	100
France...	144	15	8
Germany	20	90	175
Other countries	23	43	8
	764	734	574

The 20 volumes credited to Germany being continuations of books published in parts, received from agents in New York, the imprint in 14 of them being 1915 and in the other six 1916.

A useful addition to the library is stated to be a "Photostat," installed in November, 1916, and described as a "practically automatic photographic machine." By its means more than 6000 prints have been made at cost price for the use of Fellows, and complete copies of a number of rare works which are now on exhibition in the reading-room, and are difficult to distinguish from the originals.

COLONIAL HEALTH REPORTS.

Leeward Islands (Antigua, St. Kitts, Dominica, Montserrat, and the Virgin Islands).—According to the Blue-book, the total population of the Colony at the last Census was 127,193. During 1916 no serious outbreak of illness was reported from any of the Presidencies.

A serious attempt was made in Montserrat to eradicate yaws by the use of salvarsan, and Dr. J. C. McPherson wrote in November that the extermination of the disease was in sight. The campaign toward the relief and control of hookworm was, by the generous aid of the International Health Commission, continued in Antigua under the direction of Dr. Don Morse Griswold. The intensive plan was followed, the unit of operations being a group of villages. For the purposes of the work the island was divided into six areas. On account of the sparsity of population these areas were made as large as could be conveniently handled from a central point. Work was completed in three of these areas having an aggregate estimated population of 7565. 7477 persons were examined and 2229 found infected; 2054 were given first treatment and 1973 cured.

Admissions into the hospitals of the colony during the year numbered 4147, and there were 325 deaths in these institutions. There are two leper asylums—one in Antigua and the other in St. Kitts. In the former the average daily number of inmates was 44 and in the latter 70.

St. Vincent.—In his report for 1916–17 Mr. Anthony De Freitas, the Acting Administrator, states that the estimated population is 49,422. The birth-rate for the year was 37·4 and the death-rate 19·4 of the estimated population. Of the births, 67·87 per cent. were illegitimate.

The campaign undertaken by the International Health Board for the eradication of ankylostomiasis has been continued by Dr. P. B. Gardner. Of 8834 persons examined, 4694 were found to be with hookworm. The number treated was 3918, and of these 3335 were cured. In the Colonial Hospital 1041 patients were admitted during the year, and the death-rate was 4·3 per cent. of the cases treated. There were 49 lunatics under detention at Fort Charlotte, and in the Leper Asylum 11 patients were maintained. At the Yaws Hospital 97 cases were treated, of which 73 were discharged cured. At the usual district dispensaries and at special travelling dispensaries 1621 other yaws patients were treated, 616 of whom were cured. The Casualty Hospital at Georgetown, with four beds, continues to fulfil its purpose of providing the means of treating emergency cases.

An extraordinary rainfall was experienced in all districts during the 23 days from Oct. 21st to Nov. 12th, 1916; the total in that period, measured at the Botanic Gardens, near Kingstown, was 36·17 inches. The average for the year, as recorded at various places in the island, was 120·84 inches, as against 111·60 in 1915 and 86·71 in 1914. The mean monthly temperature was 79° F.

HEALTH AND FOOD NOTES.

A PAPER prepared by Mr. George Martineau was read by the President of the West Indian Chambers of Commerce before the Royal Society of Arts on May 1st, in which it was stated that the world's production of sugar was now nearly 8,300,000 tons. Nearly two-thirds of this came from the beetroot fields of Northern Europe and to a small extent of the United States. The great development of beet sugar was the result of energy, ability, efficiency, and, more than all, persistent scientific research. In Germany the duty levied upon the roots instead of upon the manufactured sugar had stimulated the farmers to produce the richest quality of root and the manufacturer to extract the largest quantity of sugar. The gradual development of the double carbonation method of purifying the juice had produced good results, and the cane sugar industries were now able to extract 95 per cent. of sugar juice and were ready to fight the beetroot industry. These figures may usefully be supplemented by those contained in a summary recently compiled for the U.S. Department of Agriculture, which gave the amount of sugar consumed in the United States during the year 1917 as 88·3 lb. per head of population, compared with 84·7 lb. in 1916. This represents nearly 4 oz. a day, and is equivalent to 440 calories, or about one-seventh of a total daily fuel demand of 3000 calories.

It has been announced by the Food Controller that the potato acreage for 1918 will exceed that of 1917 by about 25 per cent. This figure is based on the return of the number of persons farming one acre of land and upwards in Great Britain, and does not take into consideration the produce of allotments and cottage gardens. With these included, it is estimated that the total potato acreage will be about 900,000.

A Horticultural Advisory Committee has been appointed to advise the Board of Agriculture and Fisheries on all questions connected with horticulture, particularly with regard to the distribution of produce in the situation created by the war.

It has been decided that no further land from the parks, gardens, and open spaces under the control of the London County Council shall be taken over for allotments.

GAS INFECTION IN GUNSHOT WOUNDS.

IN the *Corresp.-bl. f. Schw. Aerzte* of April 6th, 13th, and 20th Dr. Paul G. Nigst, of Berne, has collected all that is at present known of the *putride Phlegmonen* of war from a garrison hospital in Germany. The literature is enormous, and students of the subject will be grateful for the carefully compiled summary, with a bibliography running into hundreds of items. Dr. Nigst's conclusions are disappointing, although no one will venture to quarrel with them. "Opinions and views on the etiology [of this condition] are divergent and, if anything, more in need of clearing up than before the war." He hopes that a causal prophylaxis may be found on the same lines as that applicable to tetanus in man and anthrax in animals.

THE COST OF WAR PENSIONERS IN HOSPITALS.

THE Medical Committee of the Royal Hampshire County Hospital, Winchester, finding that the grant of 5*s.* 6*d.* per man per diem offered by the Ministry of Pensions for the maintenance of war pensioners will only just cover their maintenance in hospital, have passed a resolution that the medical treatment of pensioners should be paid for by an adequate and direct remuneration of the staff on a separate basis from that of maintenance.

LECTURES FOR INTENDING BABY WEEK SPEAKERS.

WE are asked by the National Baby Week Council to announce that the lectures to prospective speakers interested in the baby week campaign to be given on Mondays at Dr. Williams' Library, 14, Gordon-square, London, W.C. (see THE LANCET, April 27th, p. 626), have been rearranged as follows:—

May 13th: Miss Alice Elliott. As already announced.
,, 20th: Cancelled.
,, 27th: "Provision for Maternity," Dr. J. H. Fairbairn.
June 3rd: "Civic Responsibility with Regard to Child Welfare," Dr. Harold Scurfield.
,, 10th: "The Working-class Mother's Point of View," Mrs. H. B. Irving.
,, 17th: "Factors of Infant Mortality," Dr. C. W. Saleeby.

Cards of admission free on application to the secretary, National Baby Week Council, 27A, Cavendish-square, London, W. 1.

At Lincoln a special course of lectures on infant care will be held, under the auspices of the National Society for the Prevention of Infant Mortality, at the municipal technical school for nurses, midwives, health visitors, and others, from May 27th to June 1st. The lecturers include Lady Barrett, Sir Francis Champneys, Miss M. B. Douie, Dr. D. Forsyth, Dr. A. R. Hallam, Major G. H. Pooley, R.A.M.C. (T.), Dr. Eric Pritchard, Dr. Clive Riviere, and Mrs. Shepherd. The fee for the complete course, comprising 16 lectures, is 7*s.* 6*d.*, or 1*s.* for a single lecture.

OUR HOSPITAL MILK-SUPPLY.

DURING the past few months the Lister Institute of Preventive Medicine has examined for the National Clean Milk Society samples of milk as they were received by 21 London hospitals, with a result that in 10 per cent. of the samples tubercle was found, and in all cases the *Bacillus coli* was present. The same quality milk is, of course, supplied to the ordinary consumer. This is a very serious condition of things, and it is certainly strange that, as the report points out, while the public can be easily aroused to take an interest in the question as to whether a milk combine may or may not be allowed to exist, the fact that milk is delivered to them in a condition which may cause disease and death is received with apathy. The National Clean Milk Society, whose aim is to raise the hygienic standard of milk and milk products, in calling attention to the matter deserves the thanks of all who value health and life.

THE DECIMAL ASSOCIATION.

THE secretary of the Decimal Association draws attention to the following extracts from the report of the committee appointed to inquire into the position of Natural Science in the Educational System of Great Britain:—

"Great importance should be attached to sound work in elementary mathematics and physical measurements and to familiarity with the use of decimals and the metric system.

The question as to the advantages and disadvantages of the metric system of weights and measures has many aspects which it is not within our province to discuss. As far, however, as education is concerned, the introduction of the metric system would be attended with great advantages. Arithmetic would be much simplified and time saved, which could be devoted to other subjects.

The present chaos of English weights and measures causes waste of time and confusion of thought, and there are strong educational reasons for the adoption of the metric system."

MEDICAL SICKNESS, ANNUITY AND LIFE ASSURANCE FRIENDLY SOCIETY.

THE thirty-fifth report and statement of accounts for the year ending Dec. 31st, 1917, was presented at the annual general meeting of the members held on May 3rd. The total number of members at the end of the year was 3314. There were 55 deaths, 18 lapses, 2 resigned, and 24 reached the age of 65 and went out of benefit. In the Sickness and Accident Fund premiums received were £23,557, interest £7484, and claims paid £17,932. 706 claims were paid. 29 members were on the Fund for the whole year, but deducting these the average duration of illness was 5 weeks 2 days. The estimated number of members on active service is 1500. The total of the Fund was £176,105. In the Annuity Fund the total amount paid was £3676, the number of members drawing annuities was 92, and the total of the Fund was £69,236. In the Life Assurance Fund the premiums received were £1532 and interest £922; 8 claims arose amounting to £1825, and the total of the Fund was £21,141. The total assets in all branches amounted to £288,037. In the year the Investment Reserve Fund has been increased from £10,000 to £20,000. The depreciation which has occurred in all stocks since the 1913 valuation prompted the committee to have a new valuation, which has been made by Mr. S. G. Warner, F.I.A., president of the Institute of Actuaries. The members are assured that the society is in a sound financial condition. The management fund expenses amounted to £2687, but included subscriptions of 100 guineas each to Epsom College and the Royal Medical Benevolent Fund.

DENTAL CLINICS.

THE metropolitan borough of St. Pancras, among the first in founding maternity and child welfare centres, has now extended the excellent work that these centres are doing by establishing a municipal dental clinic for the mothers and children. On the advice of the medical officer of health, Dr. T. Shadick Higgins, the public health committee decided that the work could be carried on more efficiently in connexion with an existing institution than by setting up a separate clinic for the purpose. Advantage was taken of the fact that the British Dentists' Hospital, the only public dental service in the metropolis, is situated at 31, Camden-road, in the centre of the borough and easy of access from all parts. Arrangements have been made with the council of the hospital for the use of a surgery on one afternoon a week. The borough council appoint their own staff and provide materials, and the hospital supplies equipment, attendance, &c. Mrs. Murch, L.D.S., has been appointed dental surgeon and Dr. J. Maughan anæsthetist. Work began on April 15th, and judging by the numbers already attending the success of the scheme is assured. The Lewisham borough council have recently opened a maternity and child welfare centre, and here also the British Dentists' Hospital has been approached to undertake the dental treatment at the clinic at 46, Rushey Green. Definite arrangements are not yet made, but it is expected in this case that the patients will be treated by the hospital staff, the council paying a capitation fee. It will be interesting to compare results when both schemes are working, in order to ascertain which is the more satisfactory to all concerned.

ARABIC MEDICAL TRACTS.

IN the Lista dei Manoscritti Arabi Nuovo Fondo della Biblioteca Ambrosiana of Milan, published in the *Rivista Orientale* of the University of Rome, several Arabic medical works are catalogued which, although of no scientific value, will be of interest for the history of medicine. There are some, however, which are worthy of attention because stated to be copies of Greek works. Of these, No. 410 in the list in the *Rivista* seems the most important. It professes to give a work, the Libro dei Cauterii, of a medical author named Plato (Iflatun al-hakim). It is a short treatise hitherto lost, but which Arabic writers had stated to be translated into Arabic. The Fihrist alludes to it as Ktab al-Kaij, and says its author was a certain Plato. He also composed a work upon phlebotomy of which a Hebrew fragment is extant and may be found in Steinschneider's Die Arab Uebersetzungen aus dem Griechischen, iii., 26. The Arabic tract at Milan preserves the Cauterii complete in 33 paragraphs.

Another manuscript, No. 351, gives a mystical commentary upon 45 verses of the Aphorisms of Hippocrates. The *Journal Asiatique* has been printing a summary of the many Musulman manuscripts collected by M. Decourdemanche, who acquired them with the view of perfecting his theory of the origin of the Arabic numerals. Several of them contain medical matter probably, from M. E. Blochet's admirable notes, worthless. No. 1322, a treatise on various subjects dedicated to Mohamed III., and so dating from the sixteenth century, has a natural history section, and in this is taken up the medicinal value of plants and oils. Its author is Mohamed Takir ibn Sheikh Nour Alla al-Nadjibi. Another codex, Supplement Turc 1341, is a treatise entirely upon pharmacy and medicine by Abu Bekr Nousrat Efendi. There are no less than 98 pages. The date of its engrossment is 1810, but certainly its lore was copied from much earlier sources. Such Semitic works as these deserve careful scrutiny. A valuable MS. is No. 1876, which purports to cure diseases by means of precious stones and is written according to the doctrines of Paracelsus.

POPULATION OF AN ALPINE HEALTH RESORT.

IN the last week of April there were 970 visitors at Arosa (6000 feet above sea-level) distributed as follows among the various nations: German, 589: Swiss, 270; Austro-Hungarian, 46; English, 23; other nationalities, 42. Besides the voluntary visitors there were 170 invalided Swiss soldiers and 121 interned German prisoners.

CENTENARIANS.

Mrs. M. Farmer, of Colyton, Devonshire, celebrated the hundredth anniversary of her birthday on April 27th.—Mr. William Williams, who was born on Jan. 3rd, 1818, has died recently at Helston, Cornwall.—William Skindle, who died at Heene, Worthing, on April 26th, aged 100, followed the calling of a postillion, his father being employed at one of the posting houses at Hounslow. He had resided at Worthing since 1873, and in retirement since 1884.

Lieutenant-Colonel T. Wallace, R.A.M.C. (T.) has been promoted from honorary serving Brother to Knight of Grace of the Order of St. John of Jerusalem in England.

A SUPPLEMENT to the *Nederl. Tijdsch. v. Geneesk.* for March 30th, 1918, gives the detailed programme of the sixty-ninth annual conference of the Maatschappij tot Bevordering der Geneeskunst, which is to be held, in spite of war conditions, in one of the Zalen van Artis at Amsterdam, on July 1st–2nd, and, if necessary, 3rd.

F. G. P.—There are two units in common use: (1) the small calorie or, as it would be better called, the gramme-calorie; (2) the large calorie or kilo-calorie. The small calorie represents the amount of heat required to raise the temperature of 1 gramme of water by 1° C. and is the ordinary standard of exact experiments. For measuring the heat value of foods the kilo-calorie has been adopted—i.e., the amount of heat required to raise 1 kilo of water by 1° C. or (which happens to be the same thing) 1 lb. of water by 4° F.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 8th, 1918.

Date.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
May 2	...	75	56	43	47	49	Overcast
,, 3	...	97	63	45	50	53	Overcast
,, 4	0·40	97	67	50	52	54	Overcast
,, 5	...	61	59	54	56	58	Overcast
,, 6	0·15	96	67	47	52	54	Cloudy
,, 7	0·18	71	56	47	49	51	Raining
,, 8	0·15	82	66	45	49	53	Cloudy

Other information which we have been accustomed to give in these "Readings" is withheld for the period of the war.